

The Study of English, French, German and Italian  
Techniques of Singing Related to the Female Adolescent Voice

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Throughout the recorded history of vocal development certain characteristics can be traced to nationalistic roots. This work explores the four major schools of singing: English, French, German and Italian and includes a brief history of the pedagogical development and ideas of these schools' development. In addition, specific techniques and their similarities and differences, between each school is explored. Through the use of students as a control group, various characteristics within the four schools are implemented in coaching. The results are noted.

The major theme of this work is to outline the major schools of vocal pedagogy and to contrast and compare specific techniques found in each school. Furthermore, regarding the individual student, the positive and negative effects of teaching in a dedicated fashion to one school versus the implementation of proven methods, of various schools, even though they cross nationalistic boundaries, has been the major thrust of this investigation

## Outline

- I. Introduction
  - A. Purpose of study
  - B. Characteristics of National Schools
- II. Development of Vocal Pedagogy
  - A. Laryngology
  - B. Development of pedagogical techniques
  - C. Historical view on techniques
  - D. Development of pedagogical concepts
- III. Description of Study
- IV. Results
  - A. Italian School
  - B. German School
  - C. French School
  - D. English School
- V. Summary of Experiment and Conclusions
  - A. Primary evaluations
  - B. Outside evaluations

Appendix One

Appendix Two

Bibliography

## Chapter I.

### Introduction to National Schools of Vocal Pedagogy

There are numerous ideas and methods on the subject of correct singing techniques. Teachers of singing invest years of training, study and research in ways to improve the sound and technique of the vocal apparatus. Over a period of time, a vast range in the variety of singing techniques and methods developed. As solo singing enhanced as a genre in music, cultures began to create their own style and techniques for proper vocal performance.

#### The purpose of this study

The purpose of this study is to analyze tonal and physical characteristics developed by the dominant pedagogical schools of singing and to use those approaches in instruction of young female singers. Within each school, English, French, German and Italian, there are specific tonal, breathing and vowel formation techniques that are successful for achieving performance level. Every national school has produced great and accomplished scholars and singers. However, there remains the fact that many of the reclaimed singers studied in more than one school of pedagogy. In this study the evidence will show that each school in some manner follows the practice of another.

Techniques and methods evolved and did not remain solely in one category or school of pedagogy. Each school learned from and expanded upon the other. Eventually a preferred tone quality, breath management system and techniques of vowel formation were achieved. Each school maintained its distinction and individuality in both pedagogy and tone. These will be the basis for investigation in this study.

### The Significance of this Study

The significance of this study is to inform voice teachers of the different techniques and methods of pedagogy used to achieve proper vocal production. Because of the emphasis placed on different techniques, teachers must know the approaches of all four nationalistic schools. Information in the areas of breath management, vowel formation and resonance enable the instructor to exercise different techniques to correct the vocal problem the student is experiencing.

Every voice does not produce the same sound. There are different timbres or colors, textures and vocal frequencies or vibrato. Each voice should be diagnosed differently according to the observation of the instructor. While a specific technique may achieve good tonal production for one student, that technique may not achieve the same results for another. Therefore, having knowledge in the different pedagogical schools opens the possibilities for correction.

### Characteristics of National Schools

Each of the four major nationalistic schools developed specific techniques that distinguish the methods taught by instructors. While the art of singing has existed for

numerous years, documentation of the pedagogy was limited. For most performers, learning the art of singing meant studying abroad and returning home with new information. Italy was the center of this development succeeded by Germany, France and England. Following is a look at each school's pedagogical development and areas of concentration.

### The Italian School

With Italy dominating the musical development of the western world during the Baroque period the foundations for singing techniques became established there. The Italian focus on solo singing allowed it to move ahead of other countries in developing a specific pedagogy. Voice teachers began to establish ideas for proper posture and breathing, as well as an ideal tone. Italy developed a method of singing combining muscle coordination with breath management, later known as *appoggio*. This technique encompassed every aspect of singing. It provided a springboard for other schools to establish their own technique and style for singing. The techniques of the Italian school resulted in a style of Italian singing called *bel canto* that became the model for beautiful singing.

### Techniques of Approach: Breath management

The Italian school was the first to emphasize breath management through muscular coordination. For the Italian School, the one idea that encompasses all principles on singing is the *Appoggio*. Miller defines the technique: “*Appoggio* encompasses the interrelationship of the muscles and organs of the trunk and neck, combining and balancing them in such an efficient way that the function of any one of them is not violated through the exaggerated action of another.”<sup>1</sup>

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<sup>1</sup> Miller, 41.

To achieve proper posture for singing, most teachers of the Italian school advocate the chest being raised before breathing. It should be forward and upright in position.<sup>2</sup> During the breath cycle, the chest should not fall. This technique is essential especially at the onset of the voice. The position of the chest has a direct effect on the breath cycle and the ability to sustain the breath stream. It is also believed that an elevated chest in combination with a pulled in abdomen and expanded ribs is most efficient in breathing.

For the controlling of the breath, Edward Lankow recommends a high chest position and abdominal pressure.<sup>3</sup> Involving the abdominal muscles during the breathing cycle allows for more control of the breath stream. Drawing in the stomach upon each intake of breath is to create a better system of control and vocal endurance.

In addition, sources on the Italian method of singing agree the chest should not fall during exhalation because of the direct relation between posture and the diaphragm. This physical technique is to insure proper breathing and support, and at the same time, allow the diaphragm to move up and down while being supported by the abdominal muscles. Muscular balance is the focus of breathing. It is the motion of balancing pressures that result in internal resisting.<sup>4</sup>

#### Techniques of Approach: Vowel Formation

Teachers of the Italian method require the mouth be in a smiling position, so that the upper row of teeth is seen.<sup>5</sup> This is to keep the mouth from being too open or too

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<sup>2</sup> Brent Jeffery Monahan, *The Art of Singing: A Compendium of Thoughts on Singing Published Between 1777 and 1927*, ( Metuchen, N.J. and London: The Scarecrow Press Inc., 1978 ), 60.

<sup>3</sup>Edward Lankow, *How to Breathe Right*, ( New York: Edward F. Clode, 1918 ), 77.

<sup>4</sup> Miller, 42.

<sup>5</sup> Francesco Lamperti, *The Art of Singing*, ( New York: G. Schirmer, Inc., 1890 ), 10.

closed. Also, it allows for mobility of the lips and jaw. The Italian language is to be sung as it is spoken, therefore a stiff jaw is undesirable. There is no attention given to a loose jaw unless there is tension present in the face.

The preferred vowel is | | which requires balance of the upper and fundamental partials.<sup>6</sup> Equalization of the vowel spectrum, known as vowel modification, is demanded. According to Miller, the teacher of the Italian school believes distortion of tone in the untrained voice is usually caused by the resonators not matching the laryngeal position needed to produce a specific vowel sound.<sup>7</sup> Their pedagogy does not uphold one ideal mouth position for each vowel. The manner in which one speaks is the bases of formation of vowels in singing.

#### Techniques of Approach: Resonance

“Resonance is the process by which the basic product of phonation is enhanced in timbre and/or intensity by the air-filled cavities through which it passes on its way to the outside air.”<sup>8</sup> Tone is produced by the manner in which the mouth is opened in the Italian method. The mouth is not to be too open or too closed as noted above. In addition, the throat is to be open in order to feel the sensations of the nasopharynx. Traditionally, teachers emphasize forward placement to generate great brilliance. The tone is not overly bright or dark, but balanced, sounding natural and unstrained. This has become known as *chiaroscuro*.

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<sup>6</sup> Miller, 56-57.

<sup>7</sup> Ibid.

<sup>8</sup> James C. McKinney, *The Diagnosis and Correction of Vocal Faults*, ( Nashville, Tennessee: Broadman Press, 1982 ), 28.



The technique *appoggio* also relates to resonance.<sup>9</sup> It is one of two parts that make up the method. The frontal facial placement and the position of the high chest associated with breathing bring about the desired sound. It is this one action of breath control and tonal focus, bound together with articulation of the vowels and consonants that produce or result in resonance.

Italy stimulated other countries to develop and seek their own musical style. The country of Germany was also flourishing in its musical development. Breath management techniques were explored and the use of imagery for voice placement became important elements of vocal production.

### The German School

Pedagogies for teaching singing in Germany were built upon the practices of the Italians. Again, there is a common thread found within techniques of singing. While these concepts were expanded in Germany and resulted in its national style, the fundamentals of the Italian influence remained. Unlike pedagogies that advocated natural methods, the Germanic school conditioned the body to hold and fix itself in specific positions. In this way the best potential for breathing and tone production was achieved.

### Techniques of Approach: Breath management

Breathing techniques in the German school involve the usage of the lower torso.<sup>10</sup> The “tilt and tuck” method for buttock and pelvic support is used to achieve correct posture for singing. Teachers of this method recognize the importance of the breath mechanism as the lungs, intercostals and diaphragm with emission for breath control lying low in the trunk. The body should be aligned with the head erect and the chest in a high

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<sup>9</sup> Ibid., 80.

<sup>10</sup> Miller, 24.

position. William Vennard although an instructor in the Italian method, advocated a tipped pelvis so that the tail is tucked in.<sup>11</sup> When the buttocks are pulled in together to cause the pelvis to tuck inward, there is a sense of lower abdominal tension. In return, muscles in and around the abdomen support the diaphragm and aid in retarding its ascension. According to Berton Coffin, there is contraction of the abdominal muscles, expansion of the rib cage and a retaining action of the diaphragm in singing.<sup>12</sup> By means of aiding this process of the lower abdomen, breath support is sustained throughout the breath cycle giving strength to the vocal apparatus.

Induced exhalation is a technique that is to bring on a relaxed form of singing. It is also called delayed inhalation or inspiration.<sup>13</sup> At first, the breath is taken in as quickly as possible with an early breath emission following immediately. The idea is to sing on as little air as possible. The concept of taking in a full breath is not to use it for the purpose of phonation, but to cause the muscles to relax and change the air in the lungs, thus producing a relaxed vocal sound.

The final breathing technique is minimal breath system.<sup>14</sup> Miller states several directions this technique can follow, but all are characterized by the suggestion that air is inhaled in small amounts to avoid lung over crowding and tension during inspiration. The idea is that little or no air is necessary to set the vocal cords vibrating. As studied by Raoul Husson, a French researcher, it is possible for the cords to vibrate without the emission of air. Husson's theory is based upon an "...active, neurochronaxic control of

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<sup>11</sup>Vennard, 17.

<sup>12</sup> Coffin, 86.

<sup>13</sup> Miller 24.

which induces vibration of the vocal cords according to electrical signals...”<sup>15</sup> Therefore, air passing through the cords is not necessary to emit phonation. Again, support for the voice is created by lower thoracic posture and tension.

#### Techniques of Approach: Vowel Formation

Vowel formation for the German school follows some of the same practices of other schools. The jaw of the Germanic singer is to be held down in a low position. It is this dropped jaw formation that is to remain as consistent as possible throughout all vowels and consonants. There is to be little change in the pharynx and the mouth.

Miller notes the favored vowel to be the | o |.<sup>16</sup> This creates increased space in the pharynx, which the German school encourages. It is also used as the position to form other vowels in the vowel spectrum, along with determining the basic posture of the mouth. Rounding vowels preferred by the German school are the [u] and [U] which aid in the buccal technique. By modifying the vowels in this manner, a more equalized spectrum is created.

#### Techniques of Approach: Resonance

Resonance of the Germanic singer is full and powerful. Teachers emphasize a deep tonal production that is likely to be heard as throaty, yet head-like. Because of the openness of the pharynx, the tone tends to be dark. It is believed that the pharynx is capable of adapting to spatial enlargements, thus creating more room in the throat to create a rich, full sound.<sup>17</sup> By relaxing the throat it is enlarged and buccopharyngeal

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<sup>14</sup> Ibid., 30.

<sup>15</sup> Wallace Heaton and C. W. Hargens, *An Interdisciplinary Index of Studies in Physics, Medicine, and Music Related to the Human Voice*, ( Bryn Maur, PN: Theodore Pressor Co., 1968 ), 15.

<sup>16</sup> Duey, 47-48.

<sup>17</sup> Miller, 63.

muscles are placed in different positions. This action produces relationships that create a better sound.

Imagery plays an important role in tone production.<sup>18</sup> Teachers instruct an “up and over” technique to get the sound out of the throat, yet retain its fullness. Students are to imagine an orange or other large object in the throat to retain the sensation of space.

The art of vocal performance was becoming an important genre in music. While Germany was establishing techniques to enhance the vocal ability of its performers, the singers of France were achieving new methods as well. As Germany sought to physically change the body to produce a quality sound, France chose to sing in a more naturalistic manner in both body position and breath management.

### The French School

During the Baroque period France began to develop a national style. But as history demonstrates, Italy was dominant in this era. France approached its singing techniques in similar methods to that of Italy. While methods have been created to format the differences in language, there is consistency in the approaches for breathing, vowel formation and resonance. The French objective was for a natural tone and beauty in singing with no physical limitations or strains on the body and voice.

### Techniques of Approach: Breathing

The concept of breathing in the French school is based upon the idea of natural breathing. Breathing is believed to be a reflex: an unconscious, spontaneous activity that attempts no voluntary control.<sup>19</sup> With this idea as a foundation, teachers of this method suggest the student not think about breathing. It should be as if asleep. According to

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<sup>18</sup> Vennard., 44.

<sup>19</sup> Fields, 75.

Witherspoon, the singer's breathing is natural and should not be strained. In addition, breath required for singing does not demand more attention in comparison to any other physical activity by a healthy human.<sup>20</sup>

In the French school, breath management is a natural process.<sup>21</sup> The term natural breathing is used by a group of philosophical teachers associated with the school. They believe that no difference exists between the breath needed for singing and the breath needed for speech. Their thought is that one does not think about breathing while speaking, so it is not necessary during singing; believing that the phrase will be dictated by the control of breath.

The posture of the body is to be in a natural position. The chest is to be raised and then expanded in order to inhale properly.<sup>22</sup> The drawing in of the breath is to be unconscious as if in conversation.<sup>23</sup> Another aspect of breathing is that supporting the breath while singing is to be unrestrained. Unnatural breathing and support ideas disturb nature's way.<sup>24</sup> Air expelling from the lungs is to be easy and unrestrained, not forced which creates tension.<sup>25</sup> Remaining free from unnecessary tension and conscious effort is the approach of the French school of pedagogy.

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<sup>20</sup> Witherspoon, 55.

<sup>21</sup> Miller, 78.

<sup>22</sup> Jean Antoine Berard, *L'Art du Chant*, A Facsimile of the 1755 Paris ed., ( N.Y.: Bronde Brothers, 1755 ) , 27.

<sup>23</sup> J.H. Duval, *Svengali's Secrets and Memoirs of the Golden Age*, ( New York: Robert Speller and Sons, Publishers, Inc., 1958 ) , 89.

<sup>24</sup> Lloyd Mallet, "Some Vocal Training Ideas Re-Explored," *NATS Bulletin*, vol. XX, no. 1 ( October 1963 ) : 8.

<sup>25</sup> Jean-Philippe Rameau, *Code de Musique*, ( New York: Broude Brothers, 1760 ) , 15.

### Techniques of Approach: Vowel Formation

In the same manner as the English, the French school advises a slight smile while singing. The lips are to be kept in a natural state, thus allowing for flexibility in language. The mouth is not to be too closed or too open.<sup>26</sup> The jaw is not placed in a low position, but merely drops to express the language. The preferred vowel being the | a |, is in direct relation to the smile position of the facial muscles and lips.<sup>27</sup> With a well-opened mouth, the tongue is at a higher position that may result in the open sound prevalent in the school. Lip mobility is in demand during singing while at the same time retaining the smile position and a fairly wide mouth. Regardless of the language being sung, the French singer appears to sing ‘on the lips’ and in the forward portion of an opened mouth.

### Techniques of Approach: Resonance

Singing with a sensation of directing the tone to the mask of the face is the technique used by the French for achieving a bright tone. The natural smile of the lips places the resonance of the sound forward. The tone seems to go “up” and “forward” producing the brilliant sound typical of the French singer.<sup>28</sup> In addition, there tends to be some degree of nasality in the tone quality. Complete nasal resonance is not desired but a balance between the buccal and nasal area. This creates a sound unique to the French school of technique, known as *chiaroscuro*.

As France developed methods of singing that were natural in body position, breath management and placement, like Germany, England developed techniques that

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<sup>26</sup> Duey, 108.

<sup>27</sup> Miller, 49.

<sup>28</sup> William Vennard, *Singing: the Mechanism and the Technic*, ( Ann Arbor, Michigan: Edwards Brothers, Inc., 1950 ) , 68.

changed the function of the body to produce proper vocal production. By creating its own style England began to make its return in singing performance.

### The English School

As vocal solo music began to develop and flourish in the 1600's, teachers in England wanted to be unique in their approach to singing and different in their methodology. Musically, Italy had thrived in its concepts of breath management and muscular control, yet England continued to create its own techniques.

The art world in England was harshly effected by the Puritan Roundheads during the period of Cromwell's Commonwealth (1649-1660).<sup>29</sup> The elaborate court cultures of the European continent inspired musical influence. The period of the Civil War and the Commonwealth saw the disappearance of the Elizabethan and Jacobean periods.<sup>30</sup> When these church and court commissions disappeared, the simpler domestic genre held a more prominent place in music history. Music saw a brief revival toward the end of the century, but struggles for a rebirth in music turned more toward Italian influences. While England holds true to its founding concepts, traces of its neighboring nations can be discovered.

### Techniques of Approach: Breath management

A singer of the English school can be recognized by posture. It is the manner in which the body is held that the ideal method of breathing is achieved. In the English school of singing, the body is held in a slightly forward position to expand back muscles and allow the rib cage to distend. This creates more breathing space in the torso since the

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<sup>29</sup> Douglass Seaton, *Ideas and Styles in the Western Musical Tradition*, (Mountain View, California: Mayfield Publishing Company, 1991 ) , 187.

<sup>30</sup> Grout, 347.

lower ribs do not collapse. The expansion of the rib cage is to be sustained as long as possible to keep the area under compression.<sup>31</sup>

Herbert Witherspoon states that correct action and tension are needed to perform any physical act.<sup>32</sup> In addition to a forward leaning position of the upper torso, the abdominal muscles are pulled in on the onset of the expiring breath stream. It is with the coordinating action of the abdomen and the breath onset that support is achieved. According to Robert Curry, rhythmic breathing actions in normal respiration are often disturbed while training for singing. Instead, strong voluntary abdominal compressions are employed to control the flow of the expiring breath stream.<sup>33</sup> This technique is referred to as diaphragmatic control. By using this method of keeping the abdominal muscles pulled in and up, support is given to the diaphragm.<sup>34</sup> Henry Coward states that lateral costal rib breathing and the drawing in of the abdomen and the viscera prevent the downward movement of the diaphragm causing it to expand outward. This expansion, coupled with the intercoastal muscles, create an upward and outward movement of the ribs, providing the widest breathing space possible. In addition, the pressure of the abdomen against the thorax allows the singer to regulate the currents of air.<sup>35</sup> It is with these methods the English achieve their manner of breathing.

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<sup>31</sup> Berton Coffin, *Historical Vocal Pedagogy Classics*, ( Metuchen, N.J. and London: The Scarecrow Press, Inc., 1989 ) , 106.

<sup>32</sup> Herbert Witherspoon, *Singing: A Treatise For Teachers and Students*, 2<sup>nd</sup> ed., ( New York: G. Schirmer, Inc., 1925 ) , 16.

<sup>33</sup> Robert Curry, *The Mechanism of the Human Voice*, ( N.Y. - Toronto: Longmans, Green and Company, 1940 ) , 13.

<sup>34</sup> Coffin, 106.

<sup>35</sup> Henry Coward, *Choral Technique and Interpretation*, ( London: Novello and Company, Limited, 1914 ) , 55.



### Techniques of Approach: Vowel Formation

Teachers in the English School promote fast, agile adjustments of the resonators above the larynx.<sup>36</sup> Balance among the resonating cavities and the laryngeal sound in respect to shape allow for partials to be evident in the changing vowel patterns. The jaw plays an imperative role in singing.

Formation of the mouth is that of a loose-hinged jaw with a slight smile, rounded.<sup>37</sup> The jaw is to be placed as low as possible, free of tension, and is to remain in the dropped position throughout the song phrase. There is little movement of the lips, almost appearing to be at rest. As noted previously, the favored vowel of the English is the [ɜ]. The jaw is to be dropped completely and then form vowels using only the tongue. Singers are not to adjust the shape of the vocal tract to accommodate the changing vowel sounds during the act of singing.<sup>38</sup> Considering these factors it is evident why this vowel is favored.

### Techniques of Approach: Resonance

Resonance, as a reaction to vowel formation, tends to be placed in the back of the head.<sup>39</sup> It is not throaty or guttural, but pure in tone. English singers typically sing without vibrato, creating a “cathedral tone” characteristic of the school. Voices sound

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<sup>36</sup> Miller, 50.

<sup>37</sup> Richard M. Bacon, *Elements of Vocal Science; Being a philosophical Enquiry into some of the Principles of Singing*, ( Champaign, Illinois: Pro Musica Press, 1966 ) , 64.

<sup>37</sup> Robert Henry, “A Comparative Study of English Choir Rehearsal Theories and Practices” ( Ph. D. diss., Indiana University, 1965 ), 113.

<sup>38</sup> Miller, 52-53.

<sup>39</sup> Henry, 113.

light and less brilliant due to the lack of upper partials in the voice. The vibrato-less voice may sound dark but the blending of multiple voices for one sound is the intent.

According to Miller, this cathedral tone is closely related to the German technique called *Kopfstimme* with the exception of the pharyngeal aspects. The English tone is placed in the back of the head in an “up and over” fashion, reducing the tone vibrancy and upper partials, striving for a balance between the resonators.<sup>40</sup> This technique coupled with the long jaw gives the tone its placement.

The style of the English is unique. The forward lean of the torso and the pure, straight tone in resonance are not found in any other pedagogical school. While England may be better known for its choral success rather than its solo performance, basic singing foundations are taught.

### Summary

Each national country has developed its own specific techniques and methods for proper vocal singing. All schools based its importance upon the breath management system. There is a common thread among them for achieving body and breath coordination, the support of the lower abdomen. While each school may have different methods and positions for the lower torso and trunk, it is the breath that puts the tone in motion.

The shape of the lips, vocal tract, tongue, soft palate, jaw and facial muscles determine the sound emitted. The formation of the vowel governs the placement of resonance. Alteration of any physical characteristic changes the tone. There are different

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<sup>40</sup> Miller, 78.

approaches for both vowel formation and resonance found in each school. In order to develop a nationalistic style it was important to follow the linguistics of speech for that country. As a result, each pedagogical school established its own distinctive vocal sound.

Proper vocal production encompasses many aspects. Breath management, vowel formation and resonance are only three elements of singing. There are other fundamentals that facilitate creating a great singer. Through visual observation and aural hearing it is possible to correct the vocal fault. In order to correct the vocal fault knowledge in all areas of pedagogy is necessary.

## Chapter II.

### Historical Development of Vocal Pedagogy

Throughout history, people have sought to discover a better way of singing. Once the vocal apparatus was identified and studied, questions about its purpose could be determined. From an early time in recorded history, efforts have been made in discovering the science of human anatomy. With the discovery of muscular structure came emphasis on function for singing. Some of these efforts caused vocal pedagogy to develop over numerous years.

## Laryngology

In Greece, as early as the fourth century BC “...citations attributed to Aristotle [gave evidence] that vocal technique had received no little attention.”<sup>41</sup> Scientists discovered the lungs, trachea and larynx and their muscular make-up. More comprehensive studies reveal the function of these muscles and organs, and their relation to speech and song.

In the fifth century, further studies of function and muscles were explored. Until this time, there was little attention given to the vocal apparatus, its mechanisms and purpose. In the age of Hippocrates, the position of the lungs and trachea was noted, yet their function was not known. Hippocrates locates the larynx, but its connection to speech had not yet been identified. In the following century Aristotle was more successful. He regarded “sound as emanating from the passage of air through the larynx and its cartilaginous structure”.<sup>42</sup> He recognized that vowels are created by the larynx and consonants by the tongue and lips.

By the second century A.D the study of the voice and its scientific pedagogy began to be researched more thoroughly. To discover the functions of cartilages and muscles and how they operate in speech, details of the vocal structure needed to be explored. Interest in the function of the voice and its muscular make-up created a new genre of science. The founder of this science of laryngology is Galen of Pergamum (130-

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<sup>41</sup> Philip A Duey, *Bel Canto in its Golden Age: A Study of its Teaching Concepts*, (New York: King's Crown Press, 1951), 28.

<sup>42</sup> Jean-Baptist Berard, *L'art du chant*, trans. Sidney Murray, (Milwaukee, Wisconsin: Pro Musica Press, 1969), 21.

200 AD). He named the principle cartilages and muscles of the vocal tract.<sup>43</sup> For approximately eight centuries, no new findings are recorded.

After 1500 the study of anatomy composition was revived. The rising of Humanism brought about an interest in the human structure. With the endeavors of men such as Berengarius of Pavia and Vesalius (1514-1564) and Fallopius (1523-1563), both of Padua, the structure of the larynx was viewed and documented in greater detail. Descriptions of cartilages and muscles became more accurate, and in 1543 Vesalius described the larynx in detail.<sup>44</sup>

In the year 1600, there was an increase in the interest of the physiology and anatomy of the larynx. Two men of Padua, Hieronymus Fabricius (1537-1619) and Julius Casserius (1545-1616) studied animals and man and gave details to structure not previously known.<sup>45</sup> Fabricius developed theories on the formation of pitch. He believed that the vocal folds acted as the lips in whistling, and the pitch was dependent upon the glottal size opening, as well as changes in the length of the larynx and trachea.<sup>46</sup> Included in this group of men were Caspar Bauhinus (1550-1624) and Battista Codronchi, his contemporary. Codronchi's findings are considered the least important because they parallel the discoveries of Galen. The contribution to the scientific realm by Bauhinus was limited to muscular terminology.<sup>47</sup> The French philosopher and Jesuit priest Marin Mersenne (1588-1648) rejected Fabricius' theory on the changing of pitch being related to

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<sup>43</sup> Duey, 14.

<sup>44</sup> Duey, 15.

<sup>45</sup> Ibid, 15.

<sup>46</sup> Berard, 22.

<sup>47</sup> Duey, 15.

the length of the trachea. He used the laws of acoustics to prove that the trachea (in relation to an organ pipe) cannot “produce a compass of two or more octaves, as could a human voice. [He believed that] the voice was produced by vibrations of the vocal bands...”<sup>48</sup>

Along with the discoveries of anatomy, the innervation of the larynx became understood. An English anatomist from Oxford named Thomas Willis (1621-1675) provided the first description of the spinal accessory and the superior laryngeal nerve. The innervation of the larynx had been almost neglected by previous scientists. According to Duey, the foremost and final noted seat of medical learning was John Baptist Morgagni (1682-1771), of Padua, along with Dominic Santorini (circa. 1700), of Venice. They worked to correct their predecessors’ errors and give final details to complete the laryngeal picture.<sup>49</sup>

In relation to acoustical aspects of vocal science, the first known physician to undertake this expedition was the eighteenth century scientist Antoine Ferrein (1693-1769). By using the trachea and larynx of a cadaver, he demonstrated that it was essential for the glottic lips to approximate and then vibrate in order for sound to be produced. He also found that the greater the air velocity passing through the glottis, the greater the intensity of sound. Also, Ferrein discovered that when the vocal cords are stretched, the pitch raises due to an increase of tension.<sup>50</sup> His conclusions were debated, yet gained

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<sup>48</sup> Berard, 22.

<sup>49</sup> Duey, 16.

<sup>50</sup> Ibid., 22-23.

general acceptance by others. It was not until the nineteenth century that his theories were corrected and verified.<sup>51</sup>

#### Development of pedagogical techniques

The sixteenth century sets the mark for evidence of the growing need for vocal pedagogy. The art of singing surpassed the only ability needed heretofore, which was to read music.

“The facility to handle passages and intervals of wide range and with good tone quality was an established precept for good performance. But means used by the singing teachers to acquire the physical ability to perform these elaborated and ornamented vocal melodies are scarcely in evidence. We know that the singers were told when and where to breathe but not how. There are no manuals showing how the flexible voice was acquired.”<sup>52</sup>

It is not until after 1600 that more direction is given. A work by Lodovico Zacconi (1555-1627) at the end of the sixteenth century, gives examples of vocal ornamentation for flexibility and instructions on what not to do while singing. Most are generalities such as sensitivity to volume, appearance and musicality. Singing was becoming a more “sophisticated art which afforded the means for technical display but by the very nature of the music itself individual emotional expression was lacking, or at least, was well circumscribed.”<sup>53</sup> The century to follow would change many previous thoughts and concepts on the technique of singing.

As solo music began to take on performance characteristics the musical culture of Italy was on the rise. It is there that many of the techniques of singing were formulated.

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<sup>51</sup> Ibid., 18.

<sup>52</sup> Ibid., 42.

<sup>53</sup> Ibid., 42-43.



Overlapping methods will be discussed. In addition, an attempt will be made to link techniques to their founding school, as well as demonstrate the ties between them.

### The Abdominal muscles

Conscious use of the abdominal wall muscles can be found in three of the four schools: the English, German and Italian. A method of support is made possible by tension in the lower trunk of the body by means of holding in the buttocks or drawing in the abdomen. Ideally, more support is given to the voice by creating control over the ascension of the diaphragm. While each school tends to be slightly different in its approach, the underlying concept remains.

In the English school, the abdomen is to be pulled up and in on the on-set of the breath. While singing, strong abdominal compressions are employed because of the disruption of the co-ordination between the thoracic and diaphragmatic muscles.<sup>54</sup> The method may also be called fixed diaphragm. David Slater, a teacher of English techniques, gives instruction on correct breathing by means of breathing down deeply to the abdomen and then immediately pulling in the abdomen while raising and expanding the ribs. He continues: “By means of this pulling in of the abdomen, the organs contained therein are pressed up into position, thus supporting, or as it is sometimes called, ‘fixing’ the diaphragm.”<sup>55</sup> This method has been practiced in the English pedagogical schools for many years. According to Duey, many breathing ideas of the English were borrowed from Italy.<sup>56</sup>

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<sup>54</sup> Curry, 13.

<sup>55</sup> David D. Slater, *Vocal Physiology and the Teaching of Singing: A Complete Guide to Teachers, Students and Candidates*, ( London: J.H. Larway, 1972) , 31-32.

<sup>56</sup> Duey, 89.

The German school approaches abdominal support differently. To achieve proper breathing and posture, teachers encourage a high chest, erect head, and a tilted pelvis causing the buttocks to be tucked inwardly.<sup>57</sup> By doing so, there is a slight tension created in the lower abdominal region, thus supporting the diaphragm. Moving the pelvis forward to pull in the buttocks, leads to proper posture, providing support for singing.<sup>58</sup>

The Italian method of pedagogy, shares a link between all three schools with the common thread being the abdominal region. William Earl Brown in his study of G.B. Lamperti writes: “He [Lamperti] restates the phenomenon that a diaphragmatic contraction downward against the viscera during singing will create an appropriate compression of the breath which allows the singer to have control over his voice.”<sup>59</sup> White also states that the lower abdominal muscles are kept in a slight degree of contraction while breathing in, an action that increases with expiration.<sup>60</sup> Although this concept may be of the Old Italian school, singers have utilized this technique throughout the years.

### The “Smile”

The use of the smile can be found in all four schools of pedagogy. It is a method of literally using the muscles of the face to smile causing the tone to be placed forward in the mask of the face. This technique aids in keeping the tone out of the back of the throat creating a more focused sound.

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<sup>57</sup> Vennard, 17.

<sup>58</sup> Brian White, *Singing Techniques and Vocal Pedagogy*, ( N.Y.: Garland Publishers., 1989 ) , 21.

<sup>59</sup> William Earl Brown, *Vocal Wisdom: Maxims of Giovanni Battista Lamperti* ( N.Y.: Arno Press, Inc., 1966 ) , 41-42.

<sup>60</sup> White, 22.

In the English school, sources given by Duey state that there are traces of a natural expression, that of a smile. A singer should hold his mouth in this position to allow for freedom of the voice.<sup>61</sup> He continues by quoting Gesualdo Lanza: “It has been advised by masters generally, that a singer should try and preserve a smiling expression in the countenance when singing...”<sup>62</sup> He then continues by supporting the ways in which the tone and overall sentiment can suffer. Witherspoon advocates this position because it is natural and provides the best tone. Almost every sound in speech can be pronounced purely and distinctly with a smile.<sup>63</sup>

In the French school the “smiling” technique used by many teachers and singers created focus of tone. French sources describe a natural position of the mouth as a slight smile. According to J.P. Martini, “...the position of the mouth should be natural and slightly smiling...”<sup>64</sup> Mengozzi also agrees that the mouth should be comfortably open and smiling.<sup>65</sup> This technique has followed the practice of French singing since the late 18<sup>th</sup> century and yet it is found in Germany as well.

According to Duey, “Hiller (1728-1804) suggests that the singer’s face should bear the expression of a gentle smile with the mouth drawn slightly to the sides and the lips held so as not to show the upper teeth...”<sup>66</sup> Hiller states that this is the most

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<sup>61</sup> Duey, 110.

<sup>62</sup> Lanza, Gesualdo, *Lanza’s Elements of Singing in the Italian and English Styles*, vol. III (London, 1813), 170, quoted in Duey, 72.

<sup>63</sup> Witherspoon, 31.

<sup>64</sup> J.P. Martini, *Melopée moderne, ou l’art du chant*, (Paris, 1792), 4. Sanford, 96.

<sup>65</sup> B. Mengozzi, *Méthode chant du conservatoire de musique*, (Paris, 1803), 8. Duey, 70-71.

<sup>66</sup> J. A. Hiller, *Anweisung zum Musikalisch-richtigen Gesange* (Leipzig: J. F. Junius, 1774): 6, quoted in Philip A. Duey, *Bel Canto in its Golden Age: A Study of its Teaching Concepts*, (New York: King’s Crown Press, 1951), 107.

beneficial way to produce good tone. From a Germanic point of view this contradicts present mouth techniques practiced. Other teachers require that the mouth be still and not change shape. It is here that evidence of technique migration is seen.

As stated earlier, the Italian method of singing dominated the European music scene. The method and practice of “smiling” has been rooted in Italy. The smiling position is the oldest concept in this study.<sup>67</sup> Francesco Lamperti states that the mouth should be in a smiling position with the lips drawn adequately tight to barely show the teeth on top.<sup>68</sup> Other supporters of this technique for proper mouth position are Mancini who states that, singers should shape the mouth, just as it would be while smiling.<sup>69</sup> Vincenzo Manfredini states, “...the mouth should, in singing, be opened neither too much nor too little, and the correct way is to keep it open as in the act of singing...”<sup>70</sup> By following this technique, there is to be purity of tone and freedom of expression.

### Singing in the Mask

Singing in the mask of the face is more of a sensational concept than a technical one. Its focus is that of resonance, but it is found to be discussed in two of the four schools studied. When previously discussed, resonance was thought of as placement of the voice. It is with this concept in mind that the method is approached.

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<sup>67</sup> Monahan, 80.

<sup>68</sup> Francesco Lamperti, *The Art of Singing*, ( New York: G. Schirmer, Inc., 1890 ) , 10.

<sup>69</sup> Giovanni Battista Mancini, *Practical Reflections on Figured Singing*, ( Champaign, Illinois: Pro Musica Press, 1967 ) , 30.

<sup>70</sup> Vincenzo Manfredini, *Regole Armoniche*, ( Venice, 1797) , 59. Duey, 104-105.

While the French did venture to find its own unique style of performance, traces of the Italian method of pedagogy remained. Singing *dans la masque*, the French found that singing naturally created a forward sound, one placed in the mask of the face. “It is thus difficult to send the voice more ‘forward’ than it is already, what nevertheless made the French apply without discernment, an ‘Italian method’ universal remedy of sort.”<sup>71</sup> This form of natural singing led to the doorstep of the Italian singer. According to Mancini, the French adopted what they lacked in their own pedagogical school from that of the Italian school. It was observed by Noemie Perugia that whatever the French lacked in singing, they borrow from the Italian method. While the French sought to discover their own style apart from the Italians, there remains to be a common element in both teaching styles.

The Italian method of “singing in the mask” is one aspect of the *appoggio*. One aspect of this technique focuses on the concept of forward placement of the voice. Having correct posture of torso leads to correct breath support, which in turn leads to tonal beauty with correct vowel formation. All of which make up the *appoggio* method.

### Breath Management

In the seventeenth and eighteenth centuries, when singing became more lyrical, teachers began to give some direction in literature. “Most writers who mention breathing in relation to singing give directions for when to take a breath, admonishing the singer against breathing in the middle of a word or phrase.”<sup>72</sup> It is also noted that in order to

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<sup>71</sup> Roland Mancini, *L’art du Chant*, ( Paris: Press Universitaires De France, 1969 ) , 25.

<sup>72</sup> Sally Allis Sandford, “Seventeenth and Eighteenth Century Vocal Style and Technique” (DMA dissertation, Stanford University, 1979 ) , 80.

become an accomplished singer, the act of breathing properly must be achieved.<sup>73</sup> How this is accomplished is different for each school of singing. The act of posture plays an important role in defining the technique of breathing preferred by each school. The foundation of controlled breathing is good posture, and the foundation of singing is controlled breath.<sup>74</sup>

### Vowel Formation

In the eighteenth and nineteenth centuries good diction was important and desired. However there were no specifics in the area of its instruction. It is not until the twentieth century that instruction on diction is given in terms of acoustical and physical laws.<sup>75</sup> Diction while singing is to follow the ways in which the language is spoken. There should be naturalness in the formation of vowels and consonants. Mouth position plays an important role in this area of study. The position of the jaw, tension of facial muscles, or the space of the throat determines the sound that will be emitted. It is the formation of the vowel that affects the placement of the voice and tone.

### Resonance

The period of *bel canto* set the standard for what was to become the model for beautiful singing. In the early baroque period, 1600's, there were two principle styles for arias.<sup>76</sup> *Bel canto* was one of these styles that used syllabic settings and comparatively slow rhythm. This allowed the singers opportunity for vocal resonance. The other style

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<sup>73</sup> Victor Alexander Fields, *Training the Singing Voice*, ( New York and London: King's Crown Press, 1947 ) , 72.

<sup>74</sup> Ivan Trusler and Walter Ehret, *Functional Lessons in Singing*, 2<sup>nd</sup> ed., ( Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972 ) , 1.

<sup>75</sup> Brent Jeffery Monahan, *The Art of Singing; A Compendium of Thoughts on Singing Published between 1777 and 1927*, ( New Jersey & London: The Scarecrow press Inc., 1978 ) , 187.

<sup>76</sup> Seaton, 171.

was contrasting, characterized by florid vocal lines and coloratura passages that demonstrated vocal agility. *Bel canto* became the general term for preference of sound and placement of the voice by teachers of different nationalities.<sup>77</sup> A desire for a free and natural tone, as well as the means by which to achieve it, becomes almost unanimous. Instructions for singing, regardless of national language or origin, found common threads of advice and admonitions in its literature. During this era, in the history of singing, there is strong evidence of accepted standards in regards to resonance.<sup>78</sup> Placement of the voice determines the overall character of the tone to be produced by the voice. According to Burgin, “Since singing tone is an elongation of vowel sounds on a predetermined pitch, resonance is vital to the quality of the tone.”<sup>79</sup> Within each school of singing there is a specific tone color that characterizes the quality of the voice. Resonance in combination with vowel formation creates the desired sound of each pedagogical school.

By the seventeenth century there was a strong musical influence in Italy. According to Donald Grout, musical thinking was dominated by Italy’s attitude, thus remaining the most influential nation in Europe in the area of music.<sup>80</sup> During the seventeenth century, Italian authorities are only concerned with the physical factors of singing such as facial expression and posture, as previously stated.<sup>81</sup>

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<sup>77</sup> Duey, 111.

<sup>78</sup> Ibid.

<sup>79</sup> John Carroll Burgin, *Teaching Singing*, ( Metuchen, N. J.: Scarecrow Press, 1973 ) , 80.

<sup>80</sup> Donald Jay Grout, *A History of Western Music*, 4<sup>th</sup> ed., ( New York and London: W.W. Norton & Company, Inc., 1988 ) , 347.

<sup>81</sup> Duey, 72.

It is not until the mid-eighteenth century that methods of singing become documented. Musical development in other countries during this era also sought their own national style. Grout accounts that in the 1630's France began to form a national style of music that resisted Italian influences for more than a century.<sup>82</sup> This nationalistic style becomes known as *galant*. Its texture was lighter and simpler than that of the Italian. The lack of support for musicians in France resulted in a deficiency of progress in the art of singing for almost thirty years.<sup>83</sup> It was not until F.J. Fetis (1784-1871) discusses an article on Pierre-Francois Tosi's singing manual that the French incorporate the term *bel canto* in referring to the Old Italian school.<sup>84</sup> This special term for beautiful singing begins to appear in other countries as well.

In Germany during the eighteenth century, the term *stile parlante* is employed as the proper way to perform. In their manuals on singing, most of the focus is on what the singer should not do while performing. There is not much room for self-expression in the early development of this school, nor are there helpful directions in the mechanics of singing. As with the early period of the Italians, focus is placed upon posture and the mechanics of appearance.<sup>85</sup> In the late 1800's, Germanic singing was thought to be superior to that of Italy. Yet it is with the Italian methods that the German singers are trained.<sup>86</sup>

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<sup>82</sup> Grout, 347.

<sup>83</sup> Duey, 10-11.

<sup>84</sup> Francois Joseph Fetes, *Bibliographie Universelle Des Musiciens*, 2<sup>nd</sup> ed., ( Paris, 1867 ) , 244-45.

<sup>85</sup> Duey, 73.

<sup>86</sup> Ibid., 10.



England was slower in establishing a style of music genre. It is during the Restoration period (1660's) that music began to be revived. As a result of foreign musicians performing in England, English culture was highly influenced by its surrounding countries. While England sought to develop a style not duplicated in physical appearance or sound, it is noteworthy that music instructors based their model upon the Italians.

### Chapter III.

#### Description of Study

This study will explore the different concepts of each of the four schools of singing. Included is the science and how it relates to the art of vocal technique through breathing, vowel formation and resonance. Results of the experimentation are also incorporated within this work to demonstrate how slight or obvious changes in physical function can change the sound permitted by the voice. In addition, an attempt is made to view each school as an individual approach to pedagogy as well as an identification of specific techniques that appear in more than one school.

While many singers left their native homeland to study voice elsewhere, unique physical and audible differences remain:

“Although historically these techniques are to be encountered predominantly within certain national or cultural boundaries, they have been exported as well, and are now to be found wherever the art of singing flourished. Even in new locales they retain an allegiance to a set of aesthetic principles which indicate their cultural regions.”<sup>87</sup>

The aesthetic principles, mentioned above, have become distinctive and characteristic to each nationalistic school. For example, English singers can be distinguished by their forward posture and cathedral tone quality while the French are noted for their bright, brassy tone and facial lift. Characteristics are individual to each school, yet have a common goal: beautiful singing.

This work experiments with the different breathing, vowel formation and resonance techniques characteristic of the four national schools. Twenty-six female voice students were divided into groups of 6 to 7. Participants were assigned to a specific school of pedagogy. The students in each group were between 14 and 17 years of age. This study was conducted in two phases. Phase I is based upon observations by the experimenter. Included are detailed notes of individual progress made by the eighteen students in each of the twenty-five minute lessons. Phase II is based upon evaluations of recordings by voice instructors. Within this phase, two additional students were chosen to represent each of the four schools for a total of eight recorded students.

Each student was assigned to one of the four schools and concentrated upon that specific school of singing for a period of ten weeks. During this time the students were introduced to the appropriate pedagogical approach methods. A wide span of voice types and stages of vocal ability were represented. Some students were beginning their first year of study, while others were beginning their fourth. For a period of ten weeks these students were taught in a twenty-five minute weekly lesson how to sing in accordance with procedures for the school to which they were assigned. According to the assigned school, students were asked to stand differently, to place and hold their jaws in one position. Others were asked to use different methods of breathing and exercising the lips and tongue.

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<sup>87</sup> Richard Miller, English, French, German and Italian Techniques of Singing: A Study of National Tonal Preferences and How They Relate to Functional Efficiency, (Metuchen, N.J.: The Scarecrow Press, 1977), xiii.

Before singing, students exercised and warmed the muscles of their voice. It is during this time that specific distinctions of vowels can be heard between the schools.

Examples of vocal techniques used are as follows:

- 1). *Ha-le-lu-jah*: sung on 1-3-5-1-5-3-1 or Do-Mi-Sol-Do-Sol-Mi-Do beginning pitch B3-C4 and extending to beginning pitch A4-B4.
- 2). *Zee-Ahh*: sung on 1-5-4-3-2-1 or Do-Sol-Fa-Mi-Re-Do beginning pitch C4 and extending to beginning pitch B4.
- 3). *Ah*: sung on 5-1 -7-1 -2-1 -7-6-5-4-3-2-1 or Sol-Do -Ti-Do -Re-Do -Ti-La-Sol-Fa-Mi-Re-Do beginning pitch F-sharp 4-G4 and extending to beginning pitch C5-D5.
- 4). *Ha-Ha-Ha-Ha-Ho-Ho-Ho-Ho-He-He-He-He*: sung on 1-3-5-3-1-3-5-3-1-3-5-3-1 or Do-Me-Sol-Me-Do-Me-Sol-Me-Do-Me-Sol-Me-So beginning pitch C4 and extending to beginning pitch B-flat 4.
- 5). *Mee-Meh-Ma-Mo-Moo*: sung on 5-5-5-5-5-4-3-2-1 or Sol-Sol-Sol-Sol-Sol-Fa-Me-Re-Do beginning pitch E4 and extending to beginning pitch D5-E5.
- 6). *Mee*: sung on 1-2-3-4-5-4-3-2-1 or Do-Re-Mi-Fa-Sol-Fa-Me-Re-Do beginning pitch C4 and extending to beginning pitch B-flat 5-B5.

Singers were selected randomly and were placed in the school where different techniques would benefit their vocal development. They were asked to practice and sing in the respective school methods and comment on the audible and physical changes that were occurring. Repertoire was chosen for each student according to vocal ability.

## Chapter IV.

### Report of Individual Experiments

The expected result of this research was to identify techniques that would enhance the development of adolescent female voices. The project included exploring unfamiliar schools of pedagogy and applying different methods as a teaching tool. Students were introduced to these techniques in an effort to provide experiences that gave them new concepts in singing. While one technique produced positive results in 90% of singers there is a variance in the results. Exposing the student to a new or different idea in the development of singing technique made possible a more desirable vocal quality for some of them.

Physical change of any part of the singing apparatus effects the sound emitted. This includes alteration of the vocal tract, tongue, soft palate, jaw, lips, and facial muscles in relation to the breath mechanism. When one element of singing is exaggerated there are obvious changes in vocal tone, resonance and breath management.

In researching the different schools of singing, the observations of Richard Miller were studied. Within his studies of older, more mature singers, one finds reference to tone, resonance, color, vowel formation and anatomical positions and the effects they have on the sound produced. These examples of mouth, tongue and upper/lower body positions as described by Miller in his book *English, French, German and Italian Techniques of Singing: A Study in National Tonal Preferences and How They Relate to Functional Efficiency*, were carried out and the results varied by individual. However, note that these experiment groups were adolescents and not mature singers.

#### Documented Evaluations

In order to evaluate the different singing techniques, tapes and charts have been included. For a fair assessment cassette tapes were given to two different teachers who are experienced voice teachers and also choral directors in public schools. Their results have been incorporated in the appendix.

At the beginning of the ten-week period, new methods were introduced, and demonstrated slowly, as to insure an understanding of each idea. For example, in the English school a forward body position may have been coupled with a loosely dropped jaw formation. In the following week, an additional concept such as pulling in the abdomen was added creating a layering effect until each idea became familiar and working as one. Throughout the study as new ideas became familiar, each student began to sing songs chosen for their lessons in the manner they were directed. By choosing a familiar song, the student was able to concentrate on the mechanics of singing rather than the text of the music. This brought about the unexpected, as well as, anticipated tonal colors and support.

In the case of non-recorded students, evaluations were made during each lesson as to breathing habits, changes, if any, in vowel formation and resonance. Comments from the students regarding the changes in posture and buccal formation and how these changes affected their ability to sing were noted. Many experienced positive changes in breath support and tone while others found their vocal ability impaired by the technique implicated. The following are individual charts based upon each lesson conducted.

### The Italian School

Students who continued the Italian method of singing were asked to follow the procedures of performance in according to the school. Breathing technique was that of the *appoggio*. Beginning with a straight posture, the student was reminded to keep a high chest position while abstaining from letting the rib cage fall throughout the exhalation cycle. Vowels formation was to be in the manner of speech. A natural approach was taken in the shape of each vowel. In addition, vowel modification was used in the upper and lower registers. Resonance was to be placed forward for natural tone quality. Overall the Italian school was successful in improving most vocal faults found in the assigned students.

TABLE II.  
OBSERVATIONS/EVALUATIONS OF ITALIAN STUDENTS TEN WEEK  
PERIOD LESSONS

**Student A**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/23/98	good support and proper posture	tall, elongated vowels	forward	
3/2/98	good low support	need longer vowel length		
3/16/98	high chest, high notes need more support (E5-F5)	longer vowel length needed, mostly pure vowels emitted	forward, front mask singing	natural tone
3/24/98	Tall posture, no falling in chest position	some short vowels	forward, front mask singing	
4/5/98	high chest, tall torso, better support	vowels becoming taller	forward	
4/20/98	better lower support, high chest, tall torso	vowels are natural but need more shape	singing in mask	vowels are beginning to add color to voice
4/27/98	support is better, high chest position	more shape needed on [ ] and [o]	forward, front mask singing	
5/4/98	high chest, more lower support needed	vowels are shaped better, more length in [ ] and [o]	frontal placement	natural tone
5/18/98	support is better, maintaining high chest position	vowels are shaped better, at times diphthong	frontal placement	



Student A in the Italian school is in the seventh grade. For a young singer she displays a forward placement in tone and consistency between registers. In the area of breath management, proper posture was maintained. The body was straight and tall, and free of tension in the neck and chest. The student was able to maintain a high chest position throughout the breathing cycle. At times, there was a tendency for the shoulders to pull forward at the end of phrases. More breath support is needed, but for a first year singer the breath system will become stronger with proper training and study.

In the area of vowel formation this singer demonstrated vowels that needed more shape. There was a dipthong to vowels. Vowels such as [e] and [ ] were approached with dropping the jaw and bringing the corners of the lips inward. While singing, vowel formation improved in the context of diction.

Resonance was placed in the front mask. The singer sensed a “buzzing” sensation in the nasal and buccal area. There were no dark or throaty sounds in her tone. The student demonstrated a natural tone and vibrancy in the middle to upper register (C4-E5).

#### **Student B**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/23/98	no collapse in chest position	pure vowels	frontal placement, mask resonance	
3/2/98	good lower support	shaped vowels	forward placement	squeezes voice in upper range
3/16/98	high chest, good phrasing, more support in upper register	natural vowels	forward placement	
3/23/98	no collapse in chest	pure vowels	forward placement, singing in mask	natural tone
4/5/98	high chest, support is better, nice phrasing	vowels are tall, pure and natural	frontal placement	
4/15/98	maintains high chest while singing	tall vowels, more shape needed on [ ] and [o]	same	upper notes are thin G5 - A-flat 5

4/27/98	lack of lower support	vowels are pure	same	
5/4/98	high chest	vowels becoming more shaped	frontal placement	upper range is more relaxed
5/11/98	better lower support	natural vowels	forward	upper range is more relaxed
5/18/98	maintains high chest, lower support is stronger	vowels are rounder and taller	natural forward placement	

Student B in the Italian school was fifteen and in the ninth grade. This student sang with vocal ease and freedom from tension. In addition, there was a natural forward placement of tone during singing. This student demonstrated a high chest position that was maintained throughout the vocal phrase. There was no collapse in the chest or evidence of tension in the upper torso or neck. The upper register (E5-A flat 5) needed additional lower support, but the student sang with good phrasing.

Vowels were clear and pure in formation. This student sang with tall vowels that were properly shaped. Vowels such as [o] and [u] needed more roundness. There was a tendency to tighten the voice in the upper range (F5-A5). The student focused on maintaining an open and relaxed throat to keep the voice from tightening.

Resonance was forward and natural in tone. The student experienced sensations in the front mask of the face. There was a ring in the voice that began to develop. Tones were not dark or swallowed. A forward placement was maintained throughout phonation.

#### **Student C**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/24/98	chest collapses, posture is poor	vowels need more shape	placement is mostly forward, some back or throaty resonance	there is unfocused tone due to lack of support
3/8/98	chest falls, chin pushes outward, no support	taller vowels needed on	becoming frontal	better tone, but non-energized
3/17/98	better chest position	more shape needed	tone is nasal	non-energized tone
3/24/98	not supporting upper	better shaped	some back	lack of energy

	register, chest falls	[ ] and [o]	placement	
3/31/98	better chest position	some spreading in upper register ([ ])	better forward placement	tone is breathy
4/14/98	better chest position, does not fall as much	needs more shape, but improving	more forward	tone is breathy
4/21/98	lack of energy and support, chest is in better position	vowel shape improving, needs more length	back placement on [ ] and [o]	
4/28/98	chest continues to fall at end of phrases	shape improving	back placement	no energy in tone
5/5/98	better energy and support	needs pure vowels	better placement	tight throat, some tension
5/12/98	chest position is better, needs more lower support	better vowel shape, some throatiness on [ ] and [o]	placement becoming forward	

Student C in the Italian school was sixteen and in the tenth grade. In the area of breath management, posture and support need much improving. The chest continued to fall during exhalation. By week five, the position of the chest was showing improvement. This student lacked energy in her breathing and had difficulty singing above C5 due to lack of support.

In the area of vowel formation, most of the vowel spectrum was sung properly. There was a need for more shape, but this area did improve with time. Vowels did tend to be spread in the upper register (D5-F5). Again, a lack of energy existed in this student.

Resonance displayed various tonal placements. Tone tended to be frontal, but at times was nasal. The student also sang with throaty, swallowed tones of which may be due to allergies. Unfortunately there was no consistency in tonal placement for this singer.

#### **Student D**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/23/98	tall torso, high chest, nice phrasing	natural and pure	frontal placement	tension in head and neck
3/2/98	tall torso, expansion	pure vowels, some	forward placement	

	of ribs, high chest	tension in lips		
3/16/98	better phrasing	need taller vowels	sings in mask	some breathiness
3/23/98	tall posture, good expansion of rib cage	vowels well shaped	forward placement	more energized tone
3/30/98	better support, less breathy	well shaped, nice and round	forward placement	high notes are thin (G5 - B-flat 5), less tension in head
4/6/98	more support in upper register	taller vowels	forward placement, sing in the mask	energized sound rid some breathiness
4/13/98	tall posture, chest remains high	vowels are pure	forward resonance	less tension in neck
4/20/98	tall torso, low support	more shape on [i]and [u]	same	less body tension, upper notes sound free (G5 - A5)
4/27/98	maintains high chest, more support in upper register	vowels are shaped better	same	upper notes better supported, some tension in head
5/11/98	better lower support	natural and pure, better shaped	same	less facial tension

Student D in the Italian school was seventeen and in the eleventh grade. In the area of breath management the singer demonstrated a tall posture and high chest position. There was tension in the jaw, neck and head. Expansion of the rib cage enabled a deep breath for this student. There was no collapsing of the chest during the breath cycle.

Vowels tended to be natural and pure. The student sings with properly shaped vowels that favor the Italian school. More length was needed on vowels such as [e] and [ ], but overall formation reflects natural speech patterns.

Placement for this student was forward and bright. There was a “buzz” in the mask of the face giving sensations of resonance. The tone was not dark or thin, with the exception of upper notes (G5-B5) being thin in texture. The voice was clear and developing a brilliance to its tone.

#### Student E

Date	Breathing	Vowel Formation	Resonance	Miscellaneous
2/25/98	chest tends to fall	more shape on [ ], [o]	mostly frontal, some	

	during singing	and [u]	back placement	
3/3/98	posture is not erect, much chest breathing	needs more roundness	some forward placement	expansion of range, high notes better tuned (E5- F-sharp 5)
3/17/98	chest is higher, support is better	more roundness	feels forward placement on "e"	feels "buzz" in mask
3/24/98	better consistency in tone, posture is taller	same	becoming forward	upper notes easier to sing
3/31/98	chest is remaining high	better vowel shape	more forward	tone is stronger
4/7/98	chest is remaining high support is better	better vowel shape	better forward placement	
4/14/98	high chest, needs lower support, feels expansion of rib cage	vowels becoming purer and natural	mostly forward, some throatiness	tone tends to be back at times on [ ]
4/21/98	support is improving	better consistency in shape	mostly forward	
5/1/98	maintaining high chest, better lower support	vowels becoming taller, more natural	better placement	feels back placement of tone

Student E in the Italian school was fourteen and in the ninth grade. In the area of breath management the posture suffered in appearance. There was a tendency for the chest to fall and the back to slump forward. The position of the torso did improve throughout the study as did support.

In the area of vowel formation most tones were natural. There was a need for length on the vowel [ ]. In addition, more roundness was needed on [o] and [u]. Vowel consistency did improve over time. Better formation helped the upper register develop a more focused sound.

Placement for this student was mostly forward. There was the tendency for tone to be back in the throat on vowels such as [ ] and [o]. Resonance placement did improve throughout the study. Forward sensations were felt on [i] of which enabled her to place

the other vowels in the mask. The frontal placement created better tonal focus as well as consistency in tonal sound.

### The German School

Students who learned new techniques in the German school achieved success, especially in breath management. Students were instructed to pull in the abdomen upon breath intake and tighten the buttocks while singing. There are two different approaches to breathing, breath damming and induced exhalation. Breath damming or *stauprinzip* is the technique of singing with out breath. Induced exhalation is the technique of expelling air as singing begins. Both resulted in different vocal on-sets. Vowel formation in this pedagogy is to have one position for each vowel. There is to be little movement in the buccal area. Resonance is to be warm and dark in tone and full in texture. The vowel formation caused the resonance to fall back naturally. Overall the pedagogy of this school was beneficial to each student.

TABLE III.

### OBSERVATIONS /EVALUATIONS OF GERMAN STUDENTS TEN WEEK PERIOD LESSONS

<b>Student A</b>				
<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/26/98	abdomen provided more energy	tall, round vowels	tone is back, round throat space	high notes easier to sing (G5-A5)
3/2/98	better breath control	tall vowels, difficult to keep one mouth position	some forward placement, lots of back space	high notes easier
3/16/98	tensed abdomen gives more support, easier	vowels becoming distorted	dark resonance	lower notes are stronger (A3-B3)

	to sing on breath			
3/23/98	strong lower support	over-extended, not natural	middle placement	fuller sound
4/1/98	stronger support	over-extended	dark tones, some frontal resonance	high notes are stronger and full
4/8/98	soft on-set singing on the breath	over-extended	throaty placement, dark color in voice	strong tone
4/14/98	good support, high chest position	tall vowels, more natural	some back placement	better consistency in sound
4/21/98	strong lower trunk/buttock support	over-extended	back resonance, swallowed tone	[ ] too dark
4/28/98	abdomen tension helps support voice	tall vowels, easier to hold mouth in one place	tone tends to be dark and swallowed	better consistency in sound
5/5/98	softer on-set singing on the breath	tall vowels, not so distorted	some back placement	[ ] too dark

Student A in the German school was fifteen and in the ninth grade. Breath support for this student improved on the first lesson. The technique of pulled abdomen gave more energy and strength to overall sound. Support became lower and stronger and gave freedom from tension in the upper register (F5-B5). The chest remained high and did not collapse during exhalation. This student preferred the breath damming technique as to the induced inhalation. A softer vocal on-set was achieved with the breath damming method.

Vowel formation was difficult in the beginning. With a fixed jaw position, tension formed in the face. As the study progressed, the fixed buccal position became easier. As a result of formation, vowels were distorted and over-extended in shape.

Placement of the voice was in the throat. Most tones were dark and swallowed. Sound became fuller and thicker in texture by the fourth week. There was also a better consistency between registers and overall sound.

#### **Student B**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/11/98	lower bounce in ab's,	difficulty in maintain-	experience back	tone has no brilliance,

	tightness in chest at end of phrase for no breath method	ing one mouth position, vowels have no shape	space	difficulty in singing high notes (F5-G5)
2/18/98	chest falls inward	difficulty in pronouncing words	taller space in throat	tension in jaw
2/25/98	feels tightness in ab's, longer phrasing	vowels are unclear, indistinctive	some back resonance	stronger tone
3/4/98	find method of no breath easier	over-extended vowels	dark, back placement	
3/11/98	softer on-set singing on the breath, lower bounce in ab's, feels tension in abdomen	some distortion of vowel formation, horizontal sound	open throat space	
4/1/98	good support	tall vowels	back placement	strong tone
4/8/98	stronger support, soft on-set with breath	over-extended vowels	both forward and throaty placement	throaty tone on [ ] and [u]
4/22/98	better support, lower bounce in abdomen	some distortion of vowel		strong high notes (F5)
4/29/98	hard attack without breath, low support	vowels not as distorted	same	some tightness in throat
5/5/98	good support	diction is slurred due to jaw fixation	dark tone, back placement	high notes more focused (F5)

Student B in the German school was thirteen and in the seventh grade. This student developed a stronger breath support system by the end of the study. Phrases were longer and the upper register easier to sing (F5-A5). The chest collapses at times, and the lower abdomen bounced with inhalation. This student had a softer vocal onset with induced inhalation and a harder attack with breath damming.

Vowel formation was difficult to maintain at first, but became easier throughout the study. There was little distortion in the shape of the vowel. Mostly, vowels were tall in length. Diction did become unclear due to the fixed buccal formation. It was difficult to pronounce words and keep the jaw from moving.



In the area of resonance, there were throaty, dark tones. Placement of the voice was in the back of the throat. The singer also experienced some tension in the throat. The upper register was stronger by the end of the study and high notes (F5-A5) were easier to sing.

**Student C**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/11/98	likes tension in lower ab's, easier to sing on the breath	some distortion, not true vowel sound	tone is focused	no chest movement
2/19/98	finds it easy to tense abdomen region	dark, tall, tension in jaw	back placement, feels space in throat	no tiredness in abdomen
2/26/98	better phrasing singing on the breath, good support	not much distortion	dark, back space in throat	
3/5/98	strong breath support	high notes easier (F5), low notes harder (A4)	same	stronger sound
3/26/98	strong breath support	over-extended vowels, limitation on high notes	throaty and dark	
4/2/98	tension in lower ab's gives much support	mouth position difficult to maintain, distorted vowels	same	
4/16/98	lower bounce in abdomen	diction is slurred, over-extended vowels	back placement	likes tightness in abdomen and buttocks
5/5/98	tall posture, no fall in chest	vowels not as distorted, jaw is tight due to held position	same	
5/7/98	easier to keep ab's in tall posture	easier to change vowel position	same	

Student C in the German school was fifteen and in the tenth grade. Breath management increased for this student within a few weeks. For the student it was easy to tense the abdomen and hold the buttocks. Posture was tall and the chest remained high

throughout the breath cycle. There was a better consistency between registers and an improvement in both upper (F5-A5) and lower (A3-C4) notes.

Vowel formation was distorted in shape. Vowels tended to be over-extended and not natural. There was difficulty in changing the shape of the vowel on rapid vocal exercises. Tension was noted in the jaw by week two and continued throughout the study. Diction was unclear and sound was indistinctive.

Placement of the voice was back in the throat. The student noticed much open space and used imagery to maintain the position. Tones tended to be swallowed and dark, there was no brilliance to the tone. Focus increased throughout the study, but overall resonance did not change from the first lesson.

#### Student D

Date	Breathing	Vowel Formation	Resonance	Miscellaneous
2/18/98	better support	shallow/dark, tension in jaw	feels resonance in sinus cavities	consistency in sound
2/23/98	likes support method	difficulty in maintaining jaw position	frontal "buzz", back resonance in upper register	fuller sound, tone is more focused
3/2/98	easier to sing without breath	high notes are easier to sing (F5-A5)	more forward placement	tightness is facial muscles
3/15/98	support system easier to hold, no breath method is easier	high notes easier to sing, damped [i] vowel	back space in throat	some tightness in chest, stronger sound
3/23/98	ab's easier to hold in, prefers no-breath method, strong support	same	placement becoming more forward	fuller sound
3/30/98	support system better	some distortion	some throaty tones, placement not as far back	
4/5/98	better support, no-breath method is stronger, other breathy	[i] vowel is back, other vowels are distorted	placement is middle and front depending upon vowel	more consistency in sound
4/15/98	good support	vowels are not pure	back placement	consistency in sound
4/20/98	high chest position,	some distortion ( [i] )	tones are throaty,	harder to descend

	better support		back placement	down scale
4/29/98	stronger upper register	tall vowels, almost distorted	back placement	

Student D in the German school was seventeen and in the eleventh grade. Within the first lesson, there was better consistency in the sound due to the breathing techniques of a pulled abdomen and tight buttocks. Support increased and strengthened throughout the study. There was some tension in the chest due to lack of air at the end of phrases. This student preferred the breath damming technique. Vocal on-set was stronger and better focused as well as easier.

Vowel formation resulted in shallow, dark tones. There was little distortion in the vowel shape. The student found it difficult to keep the fixed buccal position and felt tension in the jaw as a consequence. The shape of the vowel due to the dropped jaw did make it easier to sing upper notes (F5-A5). The throat remained open and was not tight due to the squeezing of the voice. Overall tone improved in fullness of texture.

Resonance for this student varied. Placement was forward at the beginning of the study but became throaty and swallowed by the end of the time period. The formation of the dropped jaw caused the tone to be farther back than desired. Overall texture of the voice became fuller and darker in sound.

### The French School

Students in the French school were instructed to hold the body in a natural position. The chest was to remain high and the torso upright. Breathing was to be natural as well. There was to be no conscious effort on the student to take deep breaths or prepare the body in any method for singing. Breath for singing was to be as

conversational breath. The face was to be in a “smile” with the cheeks lifted high. For notes in the upper range the tongue was to be lifted in the back in order to brighten the tone.

TABLE IV.

OBSERVATIONS /EVALUATIONS OF FRENCH STUDENTS TEN WEEK PERIOD  
LESSONS

**Student A**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/23/98	short phrases, no support	some facial tension (cheeks), vowels are spread	forward, bright	high notes sound the same (F5-G5)
3/4/98	shallow, chest breathing	spread	more space inside mouth, middle placement	tone is bright
3/17/98	shortness of phrasing, shallow breathing	[i] and [u] have nice ring, other vowels are spread	forward placement, feels more space mouth and throat	high notes easier to sing
3/24/98	little support	same	more forward placement	non-energized sound, high notes easier
3/31/98	shallow, chest breathing	spread, not tall	"nasal" placement brought tone forward	
4/7/98	same	spread, hard to maintain "smile" while descending	much brighter tone	high notes are nasal, too bright
4/14/98	little support	vowels are taking shape, not so spread	forward, not too bright	high notes sound thin, no fullness
4/21/98	no improvement	not so distorted, difficult to change vowels (ha-ho-he)	same	high notes thin
4/28/98	needs more support	spread, but not as distorted	not too bright, better placement	high notes thin
5/5/98	no improvement	some distortion, not so spread	same	hard to descend scale with "smile"

Student A in the French school was fourteen and in the ninth grade. Lessons one through three showed no improvement in breathing. Breathing continued to be shallow and from the chest. Phrases were short and the voice not supported. There was also no energy in the sound of which created a thin texture especially in the upper register.

In the area of vowel formation, there was no length or height to the shape. Vowels tended to be “short” and spread. At times the vowels were distorted and unclear. The student had difficulty maintaining the “smiling” position and felt the tension increase in the facial muscles. In addition, the rapid changing of vowel shape was hard to manage with the position of the mouth.

Resonance for this student was mostly forward. The tone did not become too bright at any time. In fact, by the end of this study placement was better than before the student began. The singer was able to experience a forward placement of tone not felt previously. Notes in the upper register (F5-A5) were somewhat nasal and thin. There was little fullness in sound.

**Student B**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/11/98	upper chest, short phrases	spread, not tall	bright, forward	difficult to sing high notes (G5-B5)
2/25/98	shallow breathing	spread	not too bright, forward	easier to hit high notes
3/2/98	little support	spread	frontal placement, bright	breathy tone
3/11/98	short phrases, no lower support	spread, difficult to sing high notes	forward, feels space in back of throat	breathy tone
3/25/98	same	spread, easier to ascend scale	forward, frontal “buzz”, sings in mask	tone is less mature
4/1/98	no improvement	ease in singing high notes, spread vowels	bright tone	thin high notes
4/8/98	shallow breathing, short phrases	hard to move lips rapidly, difficult to maintain “smile” on	bright, forward, nice “ring” developing	breathy tone

		high notes		
4/22/98	little support	same	forward, bright	thin sound
4/29/98	no energy	spread	not too bright	breathy tone
5/5/98	chest breathing, little support	spread, high notes difficult to sing	forward, not too bright, nice ring	hard to maintain “smile” at all times

Student B in the French school was seventeen and in the eleventh grade. In the area of breath management, there was much upper chest breathing. As a result there was shortness of breath and phrases. There was a lack of energy in the sound that created a breathy tone due to no lower support. At the end of the study there was no improvement in breathing.

Vowel formation was difficult to maintain. The rapid changing of vowel shape was challenging. The “smile” made formation hard to bring the lips together to form [o] and [u]. The technique was also difficult to hold on upper notes (G5-B5) that created a thin texture for the top register. The student felt some tension in the facial muscles, yet by the end of the study it had lessened.

Resonance was not overly bright for this singer. The placement was forward and in the mask of the face. The “smile” technique helped to bring the resonance forward providing a better space in which to sing. By the end of the study there was a ring developing in the voice.

#### **Student C**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/23/98	no lower support	spread vowels, no vertical length	forward, more focused tone	
2/18/98	no support, no energy	spread, some distortion	bright, forward	tone is focused, tension in face
3/2/98	short phrases, difficult to control	[ ] not tall, high notes are easy (F5)	bright, forward, singing in mask	
3/16/98	trouble getting good breath	spread	forward, not too bright, some throaty tones	
3/23/98	same	spread, distorted	singing in mask, much more forward	edge on tone, not pure and relaxed

3/30/98	little support, short phrases	becoming natural and pure	better placement, singing in mask	feels "buzz" on [i]
4/15/98	no improvement	not as distorted	not as throaty on "ah", better focus	easier to hold face in "smile"
4/20/98	no energy, chest breathing	becoming natural	forward placement	thin high notes (F5)
4/29/98	shallow chest breathing	spread	better placement, not too bright	thin high notes (F5), tone not as throaty
5/4/98	finds breathing method difficult	not as distorted	not too bright	high notes becoming fuller

Student C in the French school was seventeen and in the eleventh grade. Breath management for this singer was difficult. There was upper chest breathing and little lower support that created a shallow sound. Phrasing was short and lacked energy. In addition, the student found the breath hard to control for the duration of the song phrase. There was no improvement in this area of study.

Vowel formation varies from lesson to lesson. At times vowels were short and spread while at others the shape was natural and precise. There was little distortion of the vowel and by the sixth lesson diction became clearer. The “smile” position of the face created some tension in the muscles. This technique did become easier by the end of the study.

In the area of resonance placement of the voice was forward and more focused than previously. The sound was felt in the nasal/buccal area of the mask. There was some nasality in the tone as well as a thin texture in the upper register (E5-G5). Overall placement improved by the end of the study.

**Student D**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/25/98	chest breathing, shallow	spread, no depth to vowel	not affected	some facial tension
3/4/98	no energy in sound, short phrases	high notes difficult to sing (G5-A5), [i] vowel is tight	bright and forward, more forward than usual	pinched sound
3/18/98	little energy, no lower support	spread, difficult to sing high notes	mostly frontal placement	pinched sound
3/25/98	little energy, chest breathing	spread, [i] and [ ] are short	forward, not too bright	thin high notes
3/30/98	no change	spread, difficult to sing high notes	singing in mask, some throat space	face not as tensed, high notes are strained
4/15/98	little energy, shallow, short phrases	not too bright, difficult to change mouth position (ha-ho-he)	forward	thin high notes
4/22/98	no energy in sound	difficult to sing high notes, spread vowels	forward, not too bright	thin high notes
4/29/98	chest breathing, no energy in	not too distorted	singing in mask, some brilliance in tone	face not as tensed



	sound			
5/5/98	no change	spread, short, some harder to shape than others ( [i]- [o] )	forward placement, not too bright	high notes thin, some pinched and tensed
5/13/98	little support, short phrases	short, too spread	forward, bright	difficult to sing high notes

French student D was fifteen and in the ninth grade. In the area of breath management there was much upper chest breathing and little lower support. Breathing was shallow and insufficient. Phrases tended to be shorter and less energized. There was no improvement in this area at the end of the study.

Vowel formation created difficulty in the upper register (F5-A5) of which led to high notes being hard to sing. There was tension in the throat and neck muscles as well. The shape of the vowel was often spread and difficult to change in a rapid fashion. By the fifth lesson there was less tension in the facial muscles due to the “smile” position.

Resonance was placed forward in the mask. The tone was not too bright. There was a brilliance added by the “smile” technique that did not exist previously. Notes in the upper register were thin in texture and there was little fullness to sound.

#### **Student E**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/12/98	short phrases, little support	spread, difficult to sing high notes (G5)	bright, no forward sensations	facial muscles tired
2/19/98	chest breathing, short phrases	Spread	feels "buzz", bright, forward	facial muscles tired
2/26/98	no energy, no support	spread, short, difficult to sing high notes	singing in the mask, bright	facial muscles tired
3/5/98	short phrases	no change	forward, feels "buzz" on front teeth and tongue	facial muscles tired
3/19/98	little support	high notes difficult to sing, [ ] and [u] are short - no length	forward	breathy tone, less mature sound
3/26/98	no lower support, no energy	high notes are thin, Spread	singing in the mask	face not as tired

4/2/98	short phrases	spread, easier to descend scale with "smile"	forward mask singing	difficult to change mouth position on ha-ho-he
4/16/98	becoming better, still needs more lower support	spread, not as Distorted	forward and bright, frontal placement	thin high notes
4/23/98	improving	[i] vowel difficult to Sing	bright, forward	breathy, less mature sound
4/30/98	needs more lower support, still chest breathing	difficult to distinguish between vowels	bright, forward	less mature sound with "smile"

Student E in the French school was fourteen and in the ninth grade. Breath management was shallow and in the chest. The natural state of the body did not allow for a proper singing stance. There was no lower support or energy in the sound. Song phrases were shortened due to not enough breath. Vocal tone became breathy and less focused. Overall sound was that of a less mature singer.

Vowel formation was difficult for this singer. The facial muscles were tired as a result of the “smile” technique. By the sixth lesson tension was lessened and the position easier to maintain. The shape of the vowel was spread and there was no length on [ ] or [u]. Vowels became harder to distinguish and form in the upper and lower registers.

In the area of resonance, placement was forward and bright. By the second lesson sensations were felt on the lips and teeth. Frontal mask singing was achieved early into the study. For this student the tone was not too forward. Resonance was properly placed and not distracting to the ear. There was a nice ring developing in the voice.

### The English School

Students in the English school of pedagogy were instructed to lean the upper torso forward in order to feel back expansion for more breathing volume. In addition, the

technique of pulling in the diaphragm upon breath intake while allowing the rib cage to expand laterally was also practiced. For vowel formation the jaw is to be placed as low as possible to enhance a relaxed sound. Each vowel is to be in the same position as the one preceding it. Resonance in this pedagogy has become known as a “cathedral tone.” Tone is straight and there is no vibrato. These techniques give the English its own distinctive sound unlike any other school.

TABLE V.

OBSERVATIONS /EVALUATIONS OF ENGLISH STUDENTS TEN WEEK PERIOD  
LESSONS

<b>Student A</b>				
<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/24/98	notices lower tension	high notes more focused (G5-B5)	much back space, hallow	feels air in back of throat
3/3/98	better control with abdomen pulled, back	high notes are easier, tall vowels, not too	back placement	full sound, dull tone without vibrato

	muscles expand upon inhalation	distorted		
3/17/98	better support, feels expansion	tall vowels, high notes focused	much throat space	high notes easier to sing
3/24/98	back expansion, pulled in abdomen gives support	almost over-extended, tall	some back placement	full sound, not as nasal as before
3/31/98	more air supply	open throat, vowels not distorted	not swallowed	easier to sing high notes with pulled ab's
4/7/98	support improving	some vowel distortion	some back placement	
4/14/98	strong upper register	tall, almost distorted	swallowed and throaty [ ]	dull tone without vibrato
4/21/98	low support, strong sound, low expansion	tall	some back placement	nasal on some vowels [i] and [u]
4/28/98	low expansion, strong support	some over-extended, distorted ( [i] and [u] )	tendency to be throaty [ ]	no brilliance to tone
5/5/98	long phrases, good support	tall, almost distorted	not as far back in Throat	helped to rid some nasality

Student A in the English school was fifteen and in the ninth grade. The technique of pulling in the abdomen proved successful. Breath management support increased as did control of the breath. The forward torso position allowed for better air inhalation and phrases became longer in length. The tension in the lower abdomen freed the voice and strengthened notes in both the upper and lower register.

In the area of vowel formation, there were discrepancies. Most vowels were tall and well shaped but almost over-extended in length. There was a distortion in [i] and [u] vowel sounds due to the placement of the jaw. Overall diction was precise and clear.

Resonance was placed in the back of the throat. The formation of the vowels created space in the back of the throat resulting in a swallowed tone. Singing with no

vibrato executed a tone that was dull and covered. This method of placement did rid some nasality in the student's sound.

<b>Student B</b>				
<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/24/98	new method of breathing is hard to coordinate	tall, not distorted	much back space in Throat	stronger sound with pulled abdomen
3/4/98	feels tension in lower abdomen	tall, not distorted	open space in throat	high notes are not throaty (G5-B5)
3/18/98	feels expansion in back and all over rib area	[i] vowel falls back in throat	feels air on roof of mouth, some back Placement	high notes easier
3/25/98	hard to keep ab's in on lower notes (A3-C4)	Tall	not as back	full, strong sound
4/1/98	good support, more air expansion in ribs/back	tall, not over-extended	open throat, some back placement	
4/15/98	supported high notes, noticeable lower expansion, lower bounce	difficulty in keeping jaw in one place	some back placement	upper register fuller, no vibrato creates dull sound
4/22/98	low support and expansion	tall, not too distorted	back placement, throaty	high notes easier to sing
5/1/98	improving	difficulty in keeping jaw in one place	back placement on [i] and [ ]	must concentrate to sing in this school
5/8/98	strong support	Tall	Back	more consistency in registers
5/13/98	tall posture, lower expansion, good air supply	tall, almost over-Extended	back in throat	more consistency in registers, no brilliance in tone

Student B in the English school was fourteen and in the eighth grade. Breath management technique of pulling in the abdomen muscles was difficult. As the study progressed this method became easier and improved support and tonality. Notes in the upper register (G5-B5) were sung with freedom and ease. There was also consistency in overall sound. The forward lean of the torso created more air space resulting in longer phrases.

Vowels formation was tall in length of shape. The jaw being placed low created tension in the face for the student. The jaw did bring about tall vowels with little distortion in shape. Vowels mostly effected by the position of the jaw were [i] and [ ].

Placement of the voice was in the throat. There was much open space in the back of the throat resulting in swallowed tones. Texture of the voice increased in fullness and volume.

#### Student C

Date	Breathing	Vowel Formation	Resonance	Miscellaneous
2/23/98	feels tension in abdomen  lower support	taller vowels	middle-back placement, back space	high notes easier to sing (G5-B5), stretch in facial muscles
3/2/98	some tightness in stabilizing diaphragm	tall, no distortion	back, throaty, large space in throat	high notes easier with pulled abdomen
3/16/98	no tension in lower abdomen, stronger sound	tall, well shaped	back, singing on the throat	fuller sound
3/23/98	pull-in better when descending, some back expansion	same	becoming forward, not so dark/throaty	focused high notes, chest resonating
3/30/98	good support, feels expansion in lower dorsal, more air supply	no distortion, well shaped	some throaty tones depending upon vowel	jaw not as tense
4/5/98	better support system, longer phrases	tall, not over-extended	back placement, some throat	fuller sound
4/15/98	improving, more lower expansion	tall	back, dark, large space in throat	
4/20/98	good lower expansion of ribs and back	same	same	singing without vibrato creates dull sound
4/27/98	pull-in helps in upper range, support is improving	tall, not over-extended	back, no brilliance	sound is "flat" to singer
5/4/98	back expansion gives more air, longer phrases	tall, well shaped	singing in back of throat	strong upper range with pull-in method

Student C in the English was fifteen years old and in the ninth grade. Breath management techniques were beneficial for this student. The technique of pulling in the abdomen at the on-set of the breath resulted in a stronger, fuller sound. Intonation became focused and more precise. The upper range (G5-B5) was free of tension and it was easier to hold and sustain these notes. The expansion of the back provided this student with more volume of air allowing for better consistency in phrasing and tone.

In the area of vowel formation there was no noted distortion of sound. Vowels were not over-extended, but tall and properly shaped. The placement of the extended jaw made both lower and upper registers easier to sing. One negative aspect of the dropped jaw was the tension in the facial muscles.

Resonance was mostly in the back of the throat. Tones tended to be swallowed and hollow. The student felt a large amount of space in the back of the throat and was able to maintain the position throughout the breath cycle. Following the technique of a straight vibrato, phonation was dull and non-energetic. For the student, the sound was flat in pitch and shape.

**Student D**

<b>Date</b>	<b>Breathing</b>	<b>Vowel Formation</b>	<b>Resonance</b>	<b>Miscellaneous</b>
2/18/98	better support	shallow/dark, tension in jaw	feels resonance in sinus cavities	consistency in sound
2/23/98	likes support method	difficulty in maintaining jaw position	frontal "buzz", back resonance in upper register	fuller sound, tone is more focused
3/2/98	easier to sing without breath	high notes are easier to sing (F5-A5)	more forward placement	tightness is facial muscles
3/15/98	support system easier to hold, no breath method is easier	high notes easier to sing, damped [i] vowel	back space in throat	some tightness in chest, stronger sound
3/23/98	ab's easier to hold in, prefers no-breath method, strong support	same	placement becoming more forward	fuller sound
3/30/98	support system better	some distortion	some throaty tones, placement not as far back	
4/5/98	better support, no-breath method is stronger, other breathy	[i] vowel is back, other vowels are distorted	placement is middle and front depending upon vowel	more consistency in sound
4/15/98	good support	vowels are not pure	back placement	consistency in sound
4/20/98	high chest position, better support	some distortion [i]	tones are throaty, back placement	harder to descend down scale
4/29/98	stronger upper register	tall vowels, almost distorted	back placement	



Student D in the English school was seventeen years old and in the eleventh grade. In the area of breathing, the forward tilt of the torso created a stiff and rigid body. This resulted in tension in the neck and head. At the beginning of the study, the student was short of breath. As weeks progressed lower back expansion gave strength to the support system and led to more capacity for air. The technique of pulling in the abdomen gave a fuller sound and made the notes in the upper register easier to sing and sustain.

Vowel formation had various outcomes. At times vowels were either tall and well shaped or over-extended and distorted. This singer found that it was difficult to change the shape and sound of the vowel while vocalizing so there was no consistency throughout the range. The placement of the jaw resulted in dark and hollow tones.

In the area of resonance, placement of the voice was in the back of the throat. The singer experienced open space in the throat that affected the tones emitted during phonation. The sound was dark and breathy, and lacked the brilliance of a properly placed tone. Singing with no vibrato created a sound that was flat and non-energetic. This area of concentration did not prove the quality of the voice.

## Chapter V.

### Conclusions and Results

Included in this research are compact disks of eight students. Although not all students were recorded, those that were represent each school respectively. Being the voice teacher for these students I was aware of their vocal abilities and sought to assign them in a school that would be beneficial to their needs.

Each school had at least one strong technique that is a valuable tool in singing. In the English school, the technique is vowel formation. Although vowels had a slight tendency to be over-extended, formation of the mouth was tall and created ease into the upper register. In the French school, it is resonance and tonal placement. The brightness of the voice kept the tone from being swallowed and began to create a nice ring in the voice. In addition, intonation was more precise and focus of tone improved. For the German school, the technique is breathing. Each student who sang in this school demonstrated improvement in this area. The voice was better supported and the upper register was full and free. There was also an increase in the projection of the voice unnoticed in any other school. And for the Italian school, it is body and voice coordination known as *appoggio*. Once students grasped the concept of a high chest position and deep breathing, their singing was fuller and well supported.

#### Primary Evaluator

The following is an overall analysis regarding each pedagogical school as a whole. The areas of concentration are in breath management, vowel formation and placement of resonance. It is noteworthy that all students did not achieve the same techniques or have similar results.

#### Italian School

At the end of the ten weeks, four out of seven students in this group improved in the area of breath support. The others needed to continue working to achieve a better support system through more practice and study. Six students were able to maintain a high chest position throughout the song phrase or exercises that lead to more energy and

less air in the tone. Coordination of the breath and voice improved with focus and concentration of technique.

Vowel formation for this school was built on the relationship of speech to singing songs. Students were instructed to sing the vowels and consonants, as they would speak it in conversation. Examples of songs for this school are *Se Florindo e fedele*, *Caro mio ben*, and *Silent Noon*. Students in this group were able to produce vowels that were natural and pure in sound. Diction was clear and precise. Five of the seven singers achieved proper diction for this school. As with beginning students, rounder, taller vowels were desired. The shape of each vowel was in good formation and a comfortable jaw was void of unnecessary tension. Again, those who sang in the Italian language sang with ease and proper vowel formation.

Also used in this particular school is the conception of vowel modification. As the voice ascends in pitch, certain physical aspects within the vocal tract must change to accommodate the vowel being produced in order to retain consistency in sound. Students were taught this concept and were given a demonstration of the method. By changing the shape of the mouth as well as the vocal tract, these singers were able to sing with more ease in the upper range. In addition, it made for better transition between registers.

Table VI.- -Vowel Modification Guidelines as documented by Richard Miller.<sup>88</sup>

Closed Modification (Higher)	The Unmodified Vowel	Open Modification (Lower)
(none)	i (ee)	I (ih)
i (ee)	I (in)	e (ay)
i (ee)	e (ay)	_ (eh)

<sup>88</sup> Miller, 141.

e (ay)	_ (eh)	_ (uh) (ah)
a (sat)	(ah)	_ (aw)
(ah)	_ (aw)	o (oh)
_ (aw)	o (oh)	U (foot)
_ (aw)	U (foot)	u (moon)
(none)	u (moon)	U (foot)

A forward placement for resonance is ideal in the Italian school. Having a natural approach to vowel formation, achieving a frontal resonance was accomplished by all singers. While there remained some back placement on vowels such as [ ] and [o], the singers experienced singing in the mask of the face. The students were instructed to place each vowel in the same resonating position in order to maintain the frontal placement throughout the entire vowel spectrum. Example for this technique would be the Sol-Sol-Sol-Sol-Sol-Fa-Mi-Re-Do exercise. Two singers were able to achieve brilliance and ring in the tone produced. The voices in this school were of natural talent and ability, and had to do little to achieve a forward placement desired by the instructor.

For those students whose vocal placement was not as bright and focused, a slight “smile” enhanced tonal production. In addition to the smile, raising the eyebrows gave energy to the tone. These two ideas were introduced to create a lift in the face that was not there before. Unlike the French school, the smile did not create an overly bright or nasal sound, yet it did help to bring a ring into the voice.

### The German School

The German school of singing has numerous methods of breathing techniques.

The first technique attempted and achieved successfully is called the *gluteal-pelvic contraction*. Students were asked to hold together the buttocks and pull in the abdominal

area while singing. The method is to convey the idea of a strong support system. For each girl in this group the holding of the gluteal muscles proved supportive. All six singers improved in the area of breathing. Students felt as if they had a better lower support system for singing upper notes. Four of the six participants had an increase in range as well as freedom to sing without squeezing the voice. There was also a great improvement in uniformity of tonal sound. In addition, this method created a smoother transition through the vocal passaggio. Changes between the registers were less noticeable due to the support given to the voice.

The German school practices two procedures of breathing for the purpose of on-set. *Stauprinzip* (breath damming) was demonstrated and then performed by the student. Singing with a harder attack created a stronger tone for one singer. This method was successful in that it eliminated breathiness in their vocal sound. Also, it appeared to be an easier way to sing in addition to being a more natural way of singing. Singing on the breath, *induced exhalation*, proved to provide a softer on-set. Students who have a stronger voice in terms of volume favored this method of initiating sound. There were three participants who preferred this technique. All singers in this category improved in vocal tone and focus, and emitted a stronger sound when utilizing these breathing procedures. However, the danger of leaning on the larynx too hard was a notable disadvantage. In the beginning there was some tightness in the chest area at the end of a phrase. Yet as the weeks progressed and student's learned how to coordinate the breath with the body, the tension placed on the voice and upper torso dissipated.

*Fixed buccopharyngeal principle* is the vowel formation of the German school.

The principle idea is to have minimal movement of the pharynx and buccal area. Students were asked to have little movement with their lips, a task that was somewhat difficult at start of the study. Beginning problems were that of tension in the jaw and difficulty in maintaining a low, fixed jaw position. Three of the six singers experienced tension in the jaw due to fixation. Various students commented on the difficulty in singing high notes (G5-B5), while others felt the low jaw position made the notes easier.

Vowels were well shaped, yet were on the verge of being distorted from over extension. What was noted was the loss of a pure vowel sound due to the position of the jaw. Four of the singers produced tall vowels. Diction was clear and precise. Students also found difficulty in changing vowel shape and sound on vocal warm-ups and songs that were of a quick tempo. In some instances, words became slurred and flat in shape due to placing the jaw in one position. As with other new techniques being experimented, students did note that the jaw became easier to hold and felt less tension as lessons progressed. It is necessary to state that students who sang following these methods of vowel formation found it much easier to sing in the Germanic language than in a “foreign” tongue such as English. For example, the diction in the art song *Bist du bei mir* was more precise and clear, as well as easier to sing in the Germanic style. Other songs used were *Santa Lucia* and *Longing for Spring*.

Resonance in the German school is achieved by the open throat concept. The imagery perception of a large object in the throat was used to help the singers maintain the openness. Students did note the sensation of more space in this area and felt that it

helped upon inhalation for sufficient air and additional support. In many cases, the open throat method is a positive method to follow. Yet, there were problems that arose from this method in the adolescent voice. The sound created significant back placement and most tones were swallowed and throaty in resonance in five of the six singers.

This school practices the “up and over” technique, one that is helpful in singing in the upper register. The idea of this placement created a rounder space inside the resonating cavities. This method allowed for some head placement to be combined with the open throat, however the sound remained somewhat dark and shallow. As for the sound created, there was a sense of fullness and roundness in tonality. Two students developed a fuller sound. In addition, this technique helped in the area of projection of the voice. There was more volume emitted by the singers in this school than any other.

#### The French School

In the French school of singing, breathing is approached in a natural systematic scheme. According to Miller, “...they believe there is no essential difference between the actions of the breath mechanism in speech and those which take place in singing”.<sup>89</sup> The concept was also found true by statements of other French singing advocates: the thought and process of breathing should remain instinctive to the singer. With this in mind, four of the seven students who followed this technique were faced with a shortness of breath. Not consciously thinking about inhaling a deep breath caused the students to shorten phrases they could normally sing through at one time.

There was also a lack of energy and support in the tone with this method of natural breathing. Vocal production became un-energized for three of the participants. This brought about intonation problems and a lack of focus. In some instances, the lack of



breath support gave the vocal tone a breathy quality. Most students in this group found this procedure of breath control difficult to manage.

Vowel formation in the French school was somewhat straining to the singers. Characteristic of this school is the buccal position of a smile. In the beginning of this procedure it was difficult for the students to retain the “smile,” but throughout the following weeks, it became easier to maintain. Five singers experienced tightness and tension within the facial muscles, but the position became more comfortable with time.

Vowels for this particular group were often short and spread. The buccal position also created a thin, high register for most singers, as well as difficulty in ascending to the upper register. Most students found notes in the upper register harder to sing. Five students had thin texture in the upper passaggio. There was no fullness to the tone. Others had difficulty hitting high notes (F5-A5). In compliance with the English school, changing vowel shapes became strenuous when song passages or vowel patterns became rapid. An example of this would be the vocal exercise *Ha-Ha-Ha-Ha-Ho-Ho-Ho-Ho-He-He-He-He-He* sung on *1-3-5-3-1-3-5-3-1-3-5-3-1*. It also became difficult for the singer to distinguish between vowels because of the changing formation occurring within the mouth, and not with the lips. Vowels that caused the most noticeable distortion were [ ] and [u]. With the face lifted, there was no length to create these vowels. Overall, vowels were not excessively distorted, yet there was desire for length. With the facial muscles being lifted to a smile position, it was difficult to drop the jaw. And doing so distorts the vowel sound and placement.

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<sup>89</sup> Ibid., 39.

In terms of resonance, the French school practices a bright vocal tone. By means of the “smile” position, the placement is brought forward into the mask. With most of the students, placement was never too bright. In fact, the tone was placed in the mask and produced a forward sound. For students who were originally singing with a swallowed tone, this method brought the tone to the desired resonating area. Two students noted a “buzz” feeling around the lips and nose. The sound became “unstuck” from the back of the throat and nose and they experienced a better tonal placement. Tonality was enhanced and solidified.

Because of the difficulty of the French language in combination with the age of these young voices, native French songs were not sung. Art songs for this school included *Rend'il Serano*, *Danza*, *Danza* and *The Water is Wide*. Two students in this same group who were older displayed breathiness in their sound. Their tone became that of a less mature singer. For some, texture became thin but remained bright. At times some experienced a little nasality depending upon the vowel being phonated. This mostly occurred with [i] which is the most forward vowel in the vowel spectrum.

#### The English School

The English school rendered both positive and negative results. In the area of breathing, all six students improved. The technique of *upper dorsal breathing* is a forward and upward position of the torso. The singer is leaning forward as they breath and sing. This position allowed all students to feel the air entering the lower back muscles creating a sense of a sufficient air supply system. Singers were able to sing longer phrases than previously. Expansion of the lower torso was encouraged, and as a result of more air, the upper register was open and free of tension in all six singers.

Another area of breathing in the English school is *coastal arrest*, which is the method of retaining the expansion of the rib cage. This technique created what appeared to be a rigid and stiff torso in one of the singers and created unwanted tension in the upper body. It also led to some vocal pushing, or leaning, due to the tension placed on the voice. The concept of keeping the rib cage up and out was difficult for these young singers to achieve.

*Fixed diaphragmatic breathing* was a procedure that was easily grasped and attained by these students. The idea of fixing the diaphragm in one position in combination with a *contracted abdomen* brought about a free upper register and less tension in the vocal apparatus. For many students, there was a unified vocal quality in their vocal tone. Breaks in the registers were easier to sing through and less noticeable. Notes in the upper range, E5 and above, were stronger in volume and fuller in sound. These notes became easier to sing and sustain.

Regarding vowel formation in the English school, there was little difference in the vocal sound. Students were asked to drop the jaw as far as possible and phonate. For all six students this technique improved their enunciation. As a result, vowels were rounder, taller and better focused. There was a tendency for the diction to become overextended, as two singers discovered, but for the English school, it achieved the sound that is desired for choral singing. Vowels were not exceedingly distorted while singing, yet it was difficult for some singers to change formation quickly while retaining the dropped jaw.

There was difficulty in maintaining the jaw position. The placement of the jaw produced some tension in the face due to a lack of familiarity with the extension. Two

students experienced facial tension throughout the study. As time progressed, the position became easier to maintain for the majority of the singers. As a positive consequence, the extended jaw did make high notes easier to sing and better focused.

Singing with the placement of the jaw completely dropped brought about a throaty tone in five of the six singers. Resonance in the English school is one in which a “cathedral” tone can be recognized. In combination with a dropped jaw, singing tones are often dark and placed back in the throat. Vocal color is often heard as swallowed and hollow creating an “up and over” space in the resonating area. This technique of an open throat is beneficial in maintaining a free tone, yet a disadvantage was what students referred to as “singing in the throat.”

#### Outside Evaluations

As previously noted, phase II of this study was the evaluation of eight singers by two choral/voice teachers. It was important to the study that observations made by the instructor were either confirmed or disputed by other knowledgeable musicians. While detailed assessments are given, contrasts and comparisons are provided for each school. Most findings were in agreement with observations seen and heard by the primary instructor.

#### Italian School

In the Italian school, both teachers noted an improvement throughout the study. Breath management improved and gave shape to phrasing. The tone became focused and better tuned. At times there were intonation problems noted. Overall sound was full and bright. Vowel formation enhanced with more intense concentration. The vowel shape was round and properly formed. One teacher felt that this school worked better for

uniformly in young voices. Other comments varied from clarity of diction to an increase in projection of the voice. This method was good for transitioning into different registers, especially as the registers were developing. Coordination of the body and breath improved over the time period and proper singing habits were instilled. Please note the observations made for each voice student. (Reference CD 1A and 2A)

TABLE VII.

COMPARISON/CONTRAST EVALUATIONS OF VOICE STUDENTS

**Italian School**

	Student #1	Student #2	Student #3	Student #4	Student #5	Student #6	Student #7
good breath support	X	X		X			X
high chest position		X		X	X	X	X
tall posture	X			X	X	X	X
tall vowels		X		X	X	X	X
needs taller vowels	X		X				
natural diction	X	X		X		X	X
forward placement	X	X	X	X	X	X	X
ringing voice		X					X
body tension			X	X		X	

NOTE: Voice students 1-5 represent the evaluations of the primary instructor. Students 6 and 7 represent outside observations conducted by Christman.

**German School**

Results of the German school were comparable in the areas of breath support and tone placement. Breathing was deeper and the voice was more supported and focused at end of study. The method of pulling in the abdomen and buttocks increased the volume and support of the voice. Lower “gut” breathing was achieved at the end of the period. There were differing opinions about the placement of the voice.

One evaluator thought the voice was throaty while the other thought it to be forward.

Both agreed that vowels were tall and resonate. One noted that with the position of the set jaw, diction was unclear and not enunciated while singing in a language other than German. Please note the observations made for each voice student. Please note the observations made for each voice student. (Reference CD 1B and 2B)

TABLE VIII.

COMPARISON/CONTRAST EVALUATIONS OF VOICE STUDENTS

**German School**

	Student #1	Student #2	Student #3	Student #4	Student #5	Student #6
better breath support	X	X	X	X	X	X
abdominal tension	X	X	X	X		X
strong upper register	X		X		X	X
prefers soft onset	X	X			X	
prefers hard onset				X		
tall vowels		X		X	X	X
over-extended vowels	X	X	X			
jaw tension	X			X		X
throaty/swallowed	X	X	X	X	X	
fuller sound	X			X		

NOTE: Voice students 1-4 represent the evaluations of the primary instructor.

Students 5 and 6 represent outside observations conducted by Christman.

**French School**

For the French school, there was little agreement on vocal production. One felt that there was an improvement in focus and placement. Intonation improved as well as focus. The other evaluator heard a covered sound. In the area of volume and projection there were differing opinions. While one heard a steady increase the other heard not enough projection. Both did agree that there was a tendency for a nasal tone. Vowel

formation was not “tall” enough. The “smile” caused the face to lift the facial muscles prohibiting any length to the tone. Focus and intonation did improve throughout the study as well as pitch accuracy on rapid vocal exercises. Please note the observations made for each voice student. (Reference CD 3A and 3B)

TABLE IX.

COMPARISON/CONTRAST EVALUATIONS OF VOICE STUDENTS

**French School**

	Student #1	Student #2	Student #3	Student #4	Student #5	Student #6	Student #7
shortness of phrase	X	X	X		X		
needs more support	X	X	X		X	X	X
non-energized	X	X		X			
high notes difficult		X		X	X		
short/spread vowels	X	X	X	X	X	X	X
facial tension	X		X		X	X	X
forward placement	X	X	X	X			X
nasality of sound				X		X	X
thin upper register	X	X	X	X	X		
breathy sound		X			X		

NOTE: Voice students 1-5 represent the evaluations of the primary instructor.

Students 6 and 7 represent outside observations conducted by Christman.

**English School**

In the English school, both teachers felt that there was an improvement in the students breathing system. The forward lean of the upper torso created more air space that helped the students make longer phrases. Tone was stronger and well supported. Both noted a difference in the upper range. High notes were better supported and there was an increase in range. The pull-in upon inhalation released some of the tension placed

upon the voice. Projection of the voice was noted to increase. In addition, there were comments on “throatiness” of sound. Resonance tended to be back and swallowed but began to improve towards end of study. Please note the observations made for each voice student. (Reference CD 4A and 4B)

TABLE X.

COMPARISON/CONTRAST EVALUATIONS OF VOICE STUDENTS

**English School**

	Student #1	Student #2	Student #3	Student #4	Student #5	Student #6
back expansion	X	X	X	X	X	X
lower tension		X			X	



better support	X	X	X	X	X	
strong upper register	X		X	X		X
taller vowels	X	X	X	X	X	X
over-extended vowels	X			X		
tension in jaw			X		X	
dullness of sound	X		X	X		X
throaty/swallowed	X	X	X	X		X
open throat	X	X		X	X	X

NOTE: Voice students 1-4 represent the evaluations of the primary instructor.

Students 5 and 6 represent outside observations conducted by Christman.

### Conclusions

The concept of singing has numerous ideas and methods behind its practice. The art of singing itself has evolved through the years and along with it changes in its pedagogy. As voice instructors it is important to find what method is best for the student at that point in their vocal study to ensure proper technique. This may be more than one idea or school of technique.

In America there is diversity not only of nationalities, but also concepts and methods instruction in all areas of learning. Students who desire to learn to sing have opportunities to experience a variety of methods in order to achieve the best vocal sound.

Stella Roman writes:

“...In the U.S. many methods are used, while in the different European countries there is little choice. In Italy teachers...base their classes on the *bel canto* school; in Germany and Austria the technique used is that of the German school; and so on for France...America, being a melting pot, has at her disposal all these different vocal methods, and it’s up to the student to decide which one he is to follow.”<sup>90</sup>

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<sup>90</sup> Stella Roman, “The Italian and German Approaches to Singing,” The Music Journal vol. VII, no. 4 (June/July 1949): 22.

The intent of this study was to explore the different techniques used in the major national pedagogical schools. Each student began a different sound, body make-up and level of ability. It is hopeful that through this study, the link between all schools was established. Each school has positive and negative aspects and it is the choice of the teacher to utilize whatever technique or techniques necessary to help the student achieve the appropriate method for the student's voice.

Most teachers of singing agree that breathing is the foundation upon which singing is built. For it is the breath that carries the sound and creates the musical phrasing needed for proper technique. A proper breath system is a beginning step in developing a young voice. It is the responsibility of the teacher to introduce new methods of singing as the voice continues to change and mature. In addition, the teacher must understand that the technique or method that is successful for one student may not be for another.

Many techniques exist in the pedagogy of singing. Teachers should not be restricted by pedagogies or methodologies. A combination of techniques may be necessary to develop a skilled singer. The potential performer should not be inhibited by the limitations of knowledge and discovery. This position is supported by the evidence reported in this study.

## Appendix One

The following are evaluations as documented by Jenifer Christman, B.A., M.M. She is a former choral director in the Wylie Independent School District and current private voice teacher in the Richardson Independent School District.

### Italian School

Student #1 Grade: 8

Lesson 1: Student sings with shaped vowels and focused tone. There is shortness of breath at end of phrases that cause the voice to sound pushed. Tone is almost back and nasal.

Lesson 2: There is a desire for taller vowels, especially on [ ]. Tone is focused with exception of some straying in upper register. Song displays good diction. Breathing is somewhat better; there is not as much pushing. However, it is still shallow.

Lesson 3: Nice phrasing during warm-ups. [u] vowel is pinched on “allelujah”; [o] vowel is more opened. There is some improvement in breathing, still pushing at the end. Tone could be more forward, but it is not swallowed.

Lesson 4: Student sings with covered tone, some vowels sound swallowed. There is still pushing at the end of phrases. Her lower range is developing into a deep and focused sound. Italian diction is good during song, *Caro mio ben*.

Lesson 5: Singer has better vowels and tone; placement is more forward. There seems to be increased flexibility and transitioning into the lower range. Diction during song is clearer.

Lesson 6: Student sings with “flat” vowels on [i], [ ] vowel falls back into throat depending upon the exercise. Breathing is improving, but there is still pushing at the end of phrases on high notes. Teacher notes tension in upper body and reminds student to relax.

Lesson 7: Vowel shape and focus is improving. Middle register is well focused. Student sing with good diction throughout song. Teacher introduces “pulling and releasing” in the upper range. Teacher also notes the fallen rib cage and cramming of air to students’ attention and instructs correction.

Lesson 8: Tone is becoming more focused. There is an increase in breathing phrases.

Lesson 9: No changes.

Lesson 10: [i] vowel is more forward. Her lower range is lighter; not as heavy and dark. Student is singing with better focus in upper range. There is less pushing on the voice.

Overall evaluation: Student has good focus of tone; it seems to be covered at times. Vowels are shaped well. There is some cramming of air and pushing in the voice that is becoming better with relaxation.

Student #2 Grade: 12

Lesson 1: Student sings with bright, clear voice. Lacks some support in upper register. There is some uncertainty of song.

Lesson 2: More support is drawn to upper register. Teacher notices tension on [i] vowel and redirects to correct placement. There is a nice ring in the voice.

Lesson 3: Student sings with bright tone and evenness between vocal registers. Diction is clean and precise. [i] vowel still tight and pulled back in warm-up and song. There is good flexibility in voice.

Lesson 4: There is increasing support with exception of top register remaining a little thin. Student is singing with some intonation problems in middle range. Teacher gives explanation of “pulling-in” which seems to help the student in releasing upper notes.

Lesson 5: Tone is forward and focused. [i] vowel is more relaxed in warm-ups. “Pulling” method released top notes. Student is singing with dynamics in song, *My Johann*.

Lesson 6: Student sings with better support in upper register; singing on the breath. Demonstrates good flexibility on warm-up exercises and in song.

Lesson 7: There tends to be some intonation problems in middle range. Lower register is becoming fuller in sound. Student sing on neutral vowel on song.

Lesson 8: Teacher draws attention to lower tension as support and control for voice. Lower range increases in fullness. [i] vowel is becoming freer.

Lesson 9: Increases support in upper range. Italian diction is good, could be more defined. Teacher notes back tension in tongue and tries to correct.

Lesson 10: No changes.

Overall evaluation: Student seemed to develop fullness in the upper register. Support and control of voice increased over period of study.

## **German School**

Student #1 Grade 12

Lesson 1: Singing instructions are given to singer. Student sings with tall vowels. “Allelujah” is placed high and well focused on top. Sings with flexibility in voice.

Diction tends to be slurred at times. Nice, light voice, a little breathy. Sings high notes well.

Lesson 2: Upper register is even, has a good transition from middle to upper ranges. Student is singing with good support from below. [ ] vowel falls back at times; [i] is flat in shape. Student notes more space in mouth.

Lesson 3: Support helps in upper range. Student sings with good vowel shapes, still a bit breathy. Placement is forward during vocal warm-ups. Lower register is even and strong in volume. Student is reminded to place all vowels in one position. Introduced to different breathing techniques. Student makes longer phrases without breath.

Lesson 4: [u] vowel tends to be spread on warm-ups. Student feels that tightened buttocks create a feel of support. Tone becomes more solid, not as swallowed. There is a difference in diction and vowels while singing a song that is not parallel to vocal production in the warm-ups. Sings on neutral vowel on *Bist du bei mir*.

Lesson 5: Student is first reminded of body position. Vowels are shaped well in warm-ups. Top register is placed high and accurate in pitch. There is a forward focus, not too swallowed. Moves quickly on vowel changes “ha-ho-he”. Diction is clearer in the German song. Tone continues to be somewhat breathy while singing.

Lesson 6: Student notes better support with tightened buttocks. Support has increased in the upper register. Lower notes are strong. Tone is most breathy in the middle register when singing. Italian song is breathy and not as supported as in warm-ups.

Lesson 7: Vowels are tall; [i] has more shape. Tone is breathy in warm-ups and song. There is not as much support from below.

Lesson 8: Student sings with better support. Focus is more forward. Some vowels are a bit spread: [ ]. Student sings both breathing methods and prefers the no-breath method. Diction is slurred in Italian song, but vowels are defined while singing. Student has a difficult time pronouncing language with dropped jaw. German (*Bist du bei mir*) song seems to flow better.

Lesson 9: Not much change. Phrases are not as long as they have been.

Lesson 10: Better support system developing. German diction is shaped well. Tone is still somewhat breathy, but focus is improving.

Overall Evaluation: This method of vowel formation seemed to work better on the German piece; otherwise, diction was unclear and not precise. There was an increase in lower support and a decrease in breathiness.

Student #2 Grade: 9

Lesson 1: Student sings with back placement, almost “stuck” in the throat and head. Vowels are tall and have defined shape. Seems to be supporting upper register well. She sings with confidence.

Lesson 2: Student sings with good lower support. There is still some back placement in tone. Diction is clear while singing.

Lesson 3: Placement of voice is getting better. Student begins to sing with more space that pulls some of the sound out of the throat. [i] vowel has almost a nasal quality to it during warm-ups.

Lesson 4: Voice is supported well. [i] vowel is better. Student is singing with intonation problems, perhaps due to unfamiliarity with song.

Lesson 5: Vowels are tall, not overdone with extended jaw. Phrases are long and shaped well. There is evenness between registers, especially middle to upper.

Lesson 6: Student is singing with better placement of voice. Tone is becoming more frontal. Instructions on the different breathing methods are given and carried-out. There is a softer on-set of the voice with singing into the breath.

Lesson 7: Placement of voice has fallen again. Tone seems to be nasal and “stuck” in the head. There is an increase in support. Soft palate is too low.

Lesson 8: No changes.

Lesson 9: Having intonation in the upper register. Diction is clear when student is confident of song.

Lesson 10: Placement is more forward. [i] vowel is better focused and not so throaty. Vowels tend to be well shaped in vocal warm-ups.

## **French School**

Student #1 Grade: 11

Lesson 1: Student states that exercises are hard because her muscles seem “weak”, but understands that through practice comes strengthening. Voice is small. Neutral vowel pulled placement forward during song.

Lesson 2: Student displays more confidence in singing. There is more forward “ringing” tone. High voice locked in on [u] descending exercise. “Allelujah” is disconnected, so a fluid exercise is interjected. Student does better on fluid exercises. Upper range is not focused, yet singing song on [i] brings tone into mask of face.

Lesson 3: Student sings with better tone while working for control on moving lines. Sound is focused while “smiling”.

Lesson 4: There is much more sound. Placement has become forward and has a ring. Sings with more accuracy. Vowels [u] and [i] are sounding a bit pinched and nasal in lower register, and better in upper.

Lesson 5: High range has more depth to tonality.

Lesson 6: There is increasingly nasality with [ ] (zee-ah); [u] and [i] are sung more in the head. Scales and arpeggios are more accurate leading to better connection between high and middle registers. Breath support seems natural and sufficient.

Lesson 7: [ ] vowel has more ring and focus, and is less nasal. “Smiling” placement can be heard. The staccato exercise is matching vowel to vowel with better consistency.

Lesson 8: Taller tone in middle range is desired.

Lesson 9: No changes.

Lesson 10: No changes.

Overall evaluation: This approach worked well with this student- more sound, better placement, increased fluidity and accuracy are all evident. I worried about an increasingly “nasal” tone, however, especially in mid range.

Student #2 Grade: 10

Lesson 1: Student given instruction on “smiling” position and exhibits good understanding. Described as “pointy” or focused tone. Singer demonstrates good effort to pull tone forward out of the back of throat.

Lesson 2: There is some improvement in “brightness” of tone. Student is able to carry placement into upper range. There is an increased nasal tone on [ ] and [i]. There is an intonation problem in song-work.

Lesson 3: Upper register is more accurate on attack. Tonality is improving along with an increase of accuracy of fast moving lines. Song is not as confident and full as warm-up exercises.

Lesson 4: Singer was able to sing with a forward, ringing tone more quickly. Student has a good understanding of goal- “high cheekbone”. Sound is a bit “spread”, yet there is more fluidity and accuracy on moving lines. Pitch accuracy is increasing in song.

Lesson 5: There is more consistent, ringing tone and flexibility. Tone is less spread. Teacher feedback of [ ], not [U]. Still better pitch accuracy.

Lesson 6: First noticeable signs of a pretty vibrato in warm-ups.

Lesson 7: Student has a good, ringing tone on [u] vowel. There is more of lift into the high register. Not a good voice day for the student. Pitch accuracy is better on song, though still a problem.

Lesson 8: Students sings with more volume, especially in middle register. “[i]” vowel is pinched on high notes. There is extreme “focus” resulting in increased nasal tone in upper register. Instructions on breath support and breathing are consistent with guidelines.

Lesson 9: Student is singing well. Given instruction for relaxed body posture. [ ] vowel sounds better.

Lesson 10: Vowel placement of [ ] is good and has ring; [u] is placed better on “allelujah”; [i] is still pinched, but better. Staccato exercises are effective.

Overall evaluation: This approach worked well for this student. The ring and “smiling” placement increased focus and basic volume. Flexibility and accuracy also improved. The student exhibited good understanding of vocal goals and worked consistently toward them.

## **English School**

Student #1 Grade: 7

Lesson 1: Student is given a good explanation of “expansive” breathing. Higher register is light, clear and small, lower register is inaudible. Dropped jaw helped in volume and access to “head” tone.

Lesson 2: Increase in volume on [ ]. Good tone created after breathing instruction; student felt positive difference. Upper register is beginning to expand. Staccato exercises are difficult to sing.

Lesson 3: Student has relaxed jaw with use of “inside space”. Lower register is becoming audible.

Lesson 4: Student receives instruction for “pull-in” method. Upper register is increasing in volume and more pitches.

Lesson 5: Increase in fullness of lower register, especially in [ ]. Vowels are becoming taller and breath support is working.

Lesson 6: Student is working toward releasing upper body tension in order to allow rib/abdominal action to function properly. Middle register is increasing in volume with support improvement.

Lesson 7: There is a definite improvement in volume on the warm-up exercises. Lower register is better.

Lesson 8: No change.

Lesson 9: No change

Lesson 10: Student is singing with more volume and forward placement.

Overall evaluation: There is marked improvement in all registers in placement and volume, especially in lower register.

Student #2 Grade: 9

Lesson 1: Student has a good, clear voice but hesitant to work upper range. There are some control problems, especially at end of warm-up phrases. Given instruction on leaning forward for breathing support. Placement seems vertical rather than horizontal.

Lesson 2: Student given explanation of desired support. As a result, feels more breath and sounds more confident in upper range.

Lesson 3: Now singing with taller vowels, soft palate is higher. Student hears and feels the difference in the upper register. [i] vowel sounds back in the throat.

Lesson 4: Noticeable strengthening in extreme high register. Voice is beginning to ring. Still increase in breath support.

Lesson 5: Tone has fallen back in the throat on [ ] vowel. Control has improved at the end of phrases. Sound has become taller.

Lesson 6: No change.

Lesson 7: More control in line phrase.

Lesson 8: Tone is clearer and is developing a ring.

Lesson 9: Student is feeling the success of instructions.

Lesson 10: No change.



Overall evaluation: Student marked increase in breath support and strength in upper range.

## Appendix Two

The following are evaluations as documented by Cameron Sullenberger, B.M. He is a current choral director and private voice teacher in the Plano Independent School District.

### **Italian School**

Students in the Italian school tended to sing with lots of edge to the vowels. There was a marked improvement throughout the study. The sound was open and the tone was pure. Singers sang with good projection. This school works better uniformly for younger singers.

### **German School**

Students in the German school sang with a better breathing system. Tonality improved definitely, although sometimes it was throaty. Projection continued to improve over the study. There was more vowel resonance and a deeper “gut” sound in latter part of lessons.

## **French Students**

Students in the French school had a tone that was softer as lessons progressed: tone became covered. It was hard to hear improvements with these singers. There was not enough projection with this “school”. The sound tended to have a bit of a “lilt” to it and was less obtrusive, as compared to the German technique.

## **English Students**

Students in the English school demonstrated a covered tone that was sometimes “throaty”. There were improvements in breathing that allowed for a stronger tone. The posture used for this method seemed to help the singers in making longer phrases and have more consistency in sound. Improvements in the upper range were noticed. Sound was fuller and throat was not as tight.

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